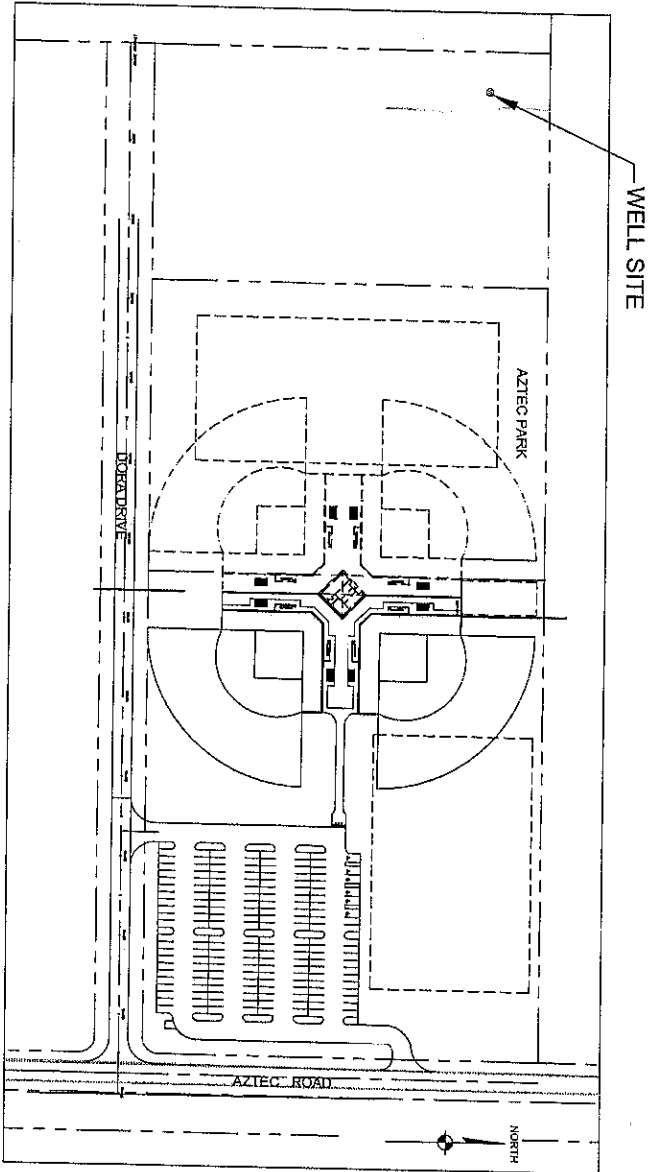


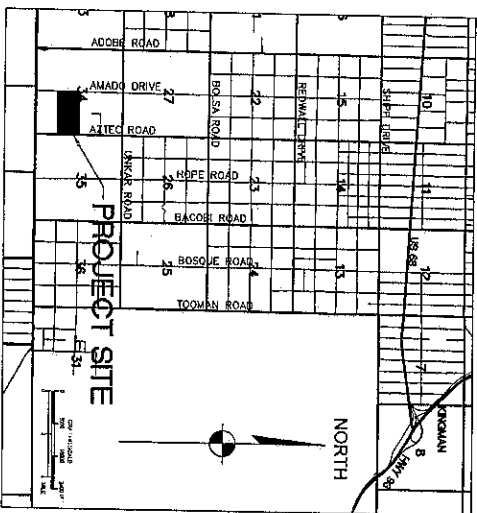
RHODES HOMES ARIZONA L.L.C.  
GOLDEN VALLEY RANCH WELL #1  
MOHAVE COUNTY, ARIZONA

FEBRUARY 2006

PRELIMINARY  
NOT FOR CONSTRUCTION



PROJECT LOCATION MAP  
Scale: NTS



VICINITY MAP  
Scale: NTS

DEVELOPER  
RHODES HOMES ARIZONA LLC  
2215 HUACALPA MTH RD.  
KINGMAN, ARIZONA 86401  
(928) 718-2210

ENGINEER / SURVEYOR  
STANLEY CONSULTANTS, INC.  
5820 S. EASTERN AVENUE,  
SUITE 200  
LAS VEGAS, NEVADA 89119  
(702) 369-9396

BASIS OF BEARINGS

NORTH 00°12'47" EAST - THE EAST LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 27, TOWNSHIP 21 NORTH, RANGE 18 WEST, GLA & SALT RIVER MERIDIAN, MOHAVE COUNTY, ARIZONA, AS DETERMINED BY THE ARIZONA COORDINATE SYSTEM OF 1983 (AZ83-WF). WEST ZONE, INTERNATIONAL FOOT, UTILIZING FAST STATIC OBSERVATIONS PROCESSED BY NGS-OPUS, N.C.S.D. "SD 35" = LATITUDE 35°09'22.45032" N, LONGITUDE 114°10'58.56309" W (NAD 83) HEIGHT 2468.56824ft (NAVD 88)

BENCHMARK

BENCHMARK # "AZT S" M.C.S.D.  
ELEVATION = 2659.468ft (NGVD 29)  
CONVERSION = 2662.014ft (NAVD 88) - 2.546 = 2659.468ft (NGVD 29)  
DESCRIPTION: 1 1/2" ALUMINUM CAP IN CONCRETE STAMP MOHAVE COUNTY 1999 "RIS 10343" LOCATED AT THE SOUTHWEST CORNER OF AZTEC ROAD & BOLSA DRIVE

DRAWING No.	SHEET No.	DESCRIPTION
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G1	1	TITLE SHEET & SHEET INDEX
C1	2	SITE PLAN & DISCHARGE PLAN
WP1	3	PUMP & DISCHARGE DETAILS
WP2	4	DETAILS
WP3	5	PUMP TO WASTE PLAN AND PROFILE
PP1	6	ELECTRICAL
E001-E012	7-18	INSTRUMENTATION
I001-I002	19-20	

APPROVAL

ADEQ	DATE
MOHAVE COUNTY	DATE
RHODES HOMES	DATE

RHODES HOMES ARIZONA, LLC

GOLDEN VALLEY RANCH WELL #1  
COVER SHEET

MOHAVE COUNTY



SCALE (H) AS NOTED  
SCALE (V) NA  
DRAWN BY MB  
CHECKED BY DKS  
DATE 02-01-2006







NO.	DESCRIPTION	SIZE	JOINT TYPE	REMARKS
1	ELECTRIC MOTOR	600 HP	----	N.L.C. BY PUMP EQUIPMENT SUPPLIER
2	DISCHARGE HEAD	12" DISCHARGE	----	N.L.C. BY PUMP EQUIPMENT SUPPLIER
3	AIR/VAC VALVE ASSEMBLY	1"	----	APCO SERIES 140
4	CONG AIR VAC/AR RELEASE DEEP WELL AIR VENT	2"	----	APCO 144 DAT
5	SILENT CHECK VALVE	12"	FL X FL	OCV SERIES 84-3
6	BUTTERFLY VALVE	12"	FL X FL	ELECTRIC MOTOR ACTUATOR
7	SPOOL PIECE	12"	FL X FL	MINIMUM LENGTH OF 5 PIPE DIAMETERS
8	MAGNETO FLOWMETER	12"	FL X FL	SIEMENS MAG 5100W
9	SPOOL PIECE W/OUTLET	12"	FL X FL	MINIMUM LENGTH OF 3 PIPE DIAMETERS
10	AWMA BUTTERFLY VALVE	12"	FL X FL	HAND WHEEL OPERATOR
11	CONG AIR VAC/AR RELEASE VALVE ASSEMBLY	1"	----	APCO 143C
12	AUTOMATIC CONTROL VALVE	8"	FL X FL	OCV SERIES 126
13	BUTTERFLY VALVE	8"	FL X FL	HAND WHEEL OPERATOR
14	TEE	12" x 12" x 8"	FL X FL X FL	
15	BALL VALVE	1	THREADED	
16	SPOOL PIECE WITH TAP	8	FL X FL	
17	SURGE ANTICIPATION VALVE	12	FL X FL	OCV SERIES 108SA-3
18	TEE	8 X 8 X 8	FL X FL	
19	90° BEND	8	FL X FL	
20	90° BEND	12"	FL X FL	
21	STATIC MIXER	12"	FL X FL	KOFLD SERIES 512 2 ELEMENT

- 1 CONTRACTOR TO COORDINATE PUMP PISTONAL DIMENSIONS
- 2 WITH PUMP DISCHARGE HEAD DIMENSIONS
- 3 ABOVE GROUND PIPE TO BE CL. 53 DUCTILE IRON WITH
- 4 BEYOND GROUND PIPE TO BE PVC C-900
- 5 ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH
- 6 MANUFACTURERS INSTRUCTIONS
- 7 CONTRACTOR SHALL INSTALL TWO ACCESS PORTS WITH
- 8 THE PUMPING EQUIPMENT. THE ACCESS PORTS SHALL
- 9 COMPRESS 1 1/2-INCH INSIDE DIAMETER GALVANIZED STEEL
- 10 ACCESS PIPES EXTENDING FROM THE TOP OF THE
- 11 ACCESS PORTS TO THE TOP OF THE PUMP BOWLS FOR
- 12 MEASUREMENT OF WATER LEVEL. THE OTHER END OF
- 13 THE 1 1/2-INCH PIPES SHALL BE EQUIPPED WITH A
- 14 STRAIGHT COPS AND THE BOTTOM 20 FEET OF THE PIPE
- 15 THROCKING SHALL BE PERFORATED WITH A MINIMUM OF TEN
- 16 (10) 1/4-INCH DIA. HOLES PER FOOT. THE HOLES
- 17 SHALL BE EVENLY SPACED. THE SOUNDER ACCESS PIPES
- 18 SHALL PERMIT THE FREE AND UNOBSTRUCTED PASSAGE OF
- 19 THE SOUNDING ELECTRIC SOUNDER AND PRESSURE
- 20 RECORDING DEVICES. THE ACCESS PIPES
- 21 SUCH THAT ACCURATE WATER LEVEL MEASUREMENTS CAN
- 22 BE OBTAINED. THE ACCESS PORT AND PIPE DESIGN SHALL
- 23 BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO
- 24 FARMICATION OF THE PIPE AND FITTINGS.

PIPING PLAN  
SCALE: N.T.S.

$$\frac{A}{WP1}$$

- 1 CONTRACTOR TO COORDINATE PUMP PEDISTAL DIMENSIONS WITH PUMP DISCHARGE HEAD DIMENSIONS
- 2 ABOVE GROUND PIPE TO BE CL 53 DUCTILE IRON WITH EPOXY PAINT
- 3 BELOW GROUND PIPE TO BE PVC C-900
- 4 ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS

**FL = FLANG**

GOLDEN VALLEY RANCH WELL #1  
PUMP AND DISCHARGE DETAILS  
E COUNTY

## Stanley Consultants INC.

5820 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89119  
(702) 369-9396 Fax (702) 369-9793  
[www.stanleygroup.com](http://www.stanleygroup.com)

SCALE (H) 1" = 2'

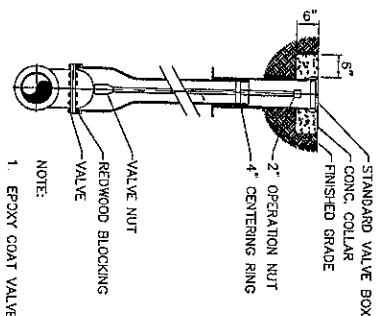
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DRAWN BY B. Curtis

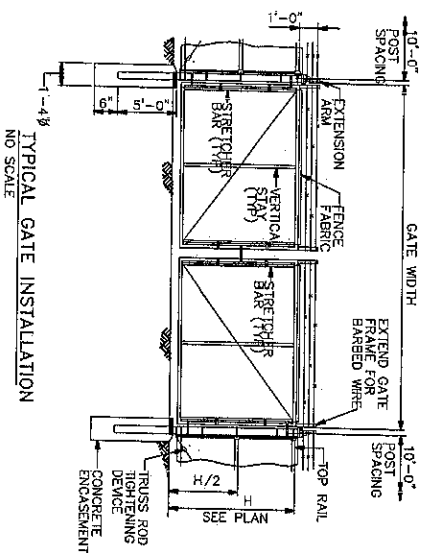
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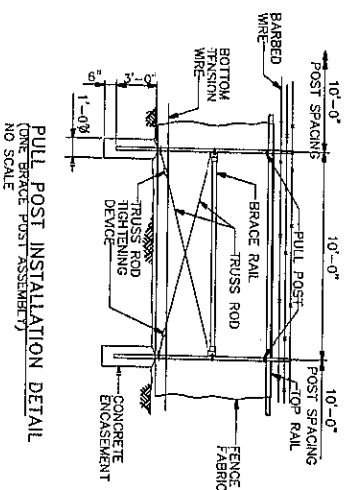
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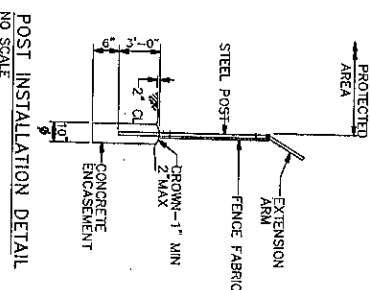
TYPICAL VALVE BOX 1  
SCALE: N.T.S. WP2



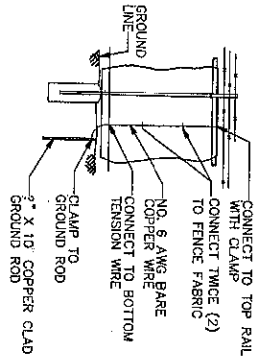
TYPICAL GATE INSTALLATION  
NO SCALE



PULL POST INSTALLATION DETAIL  
(ONE BRACE POST ASSEMBLY)  
NO SCALE



POST INSTALLATION DETAIL  
NO SCALE

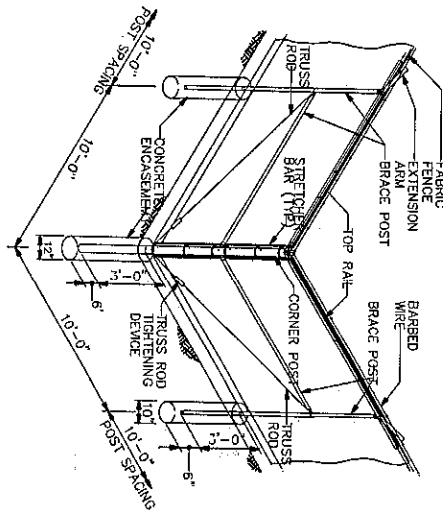
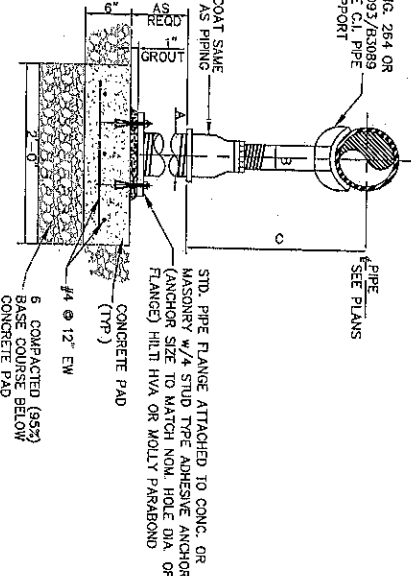


TYPICAL GROUND ROD INSTALLATION DETAIL  
NO SCALE

FENCE DETAIL 3  
SCALE: N.T.S. WP2

SIZE	A	B	UNIT	1	MAX.
4	3	2 1/2	IN.	1/4	14
6	3	2 1/2	IN.	1/4	14
8	3	2 1/2	IN.	1/4	14
10	3	2 1/2	IN.	1/4	14
12	3	2 1/2	IN.	1/4	14
14	4	3	IN.	1/4	18 3/4
16	4	3	IN.	1/4	18 3/4
18	4	3	IN.	1/4	18 3/4
20	5	3 1/2	IN.	1/4	20 3/4
22	5	3 1/2	IN.	1/4	20 3/4
24	5	3 1/2	IN.	1/4	20 3/4
26	5	3 1/2	IN.	1/4	20 3/4
28	5	3 1/2	IN.	1/4	20 3/4
30	5	3 1/2	IN.	1/4	20 3/4
32	5	3 1/2	IN.	1/4	20 3/4
34	5	3 1/2	IN.	1/4	20 3/4
36	5	3 1/2	IN.	1/4	20 3/4
38	5	3 1/2	IN.	1/4	20 3/4
40	5	3 1/2	IN.	1/4	20 3/4

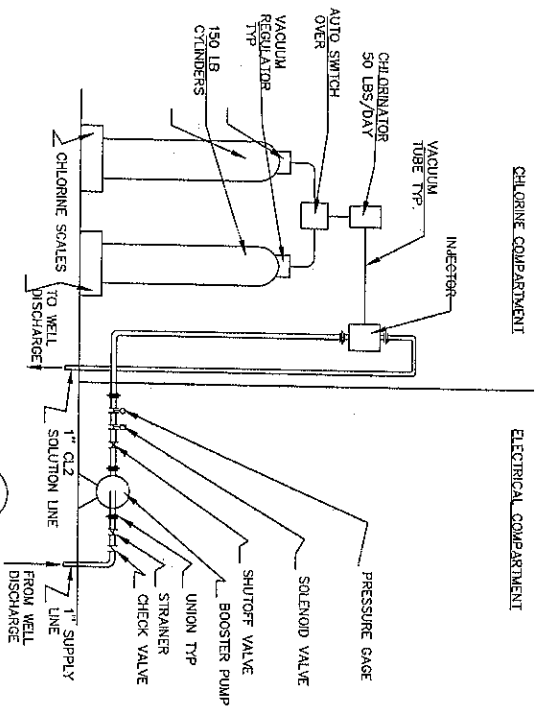
PIPE SUPPORT 2  
SCALE: N.T.S. WP2



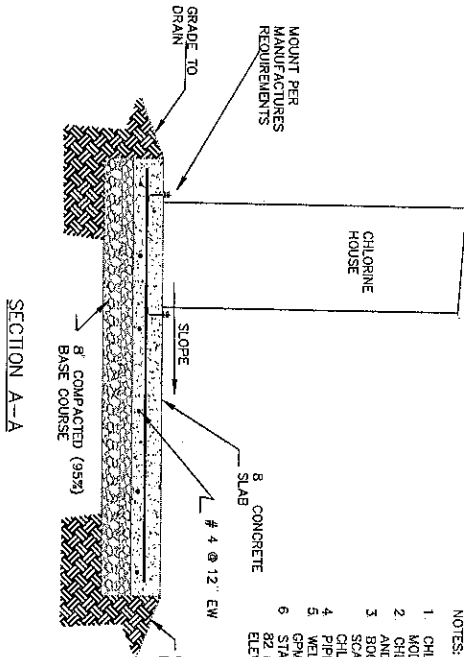
TYPICAL CORNER, ANGLE AND PULL POST DETAIL  
NO SCALE (TWO BARS FOR ANGLES)  
NO SCALE

NOTES:  
ALTERNATE DETAILS MAY BE PROPOSED REFER TO PROJECT PLANS FOR LOCATION OF FENCE.

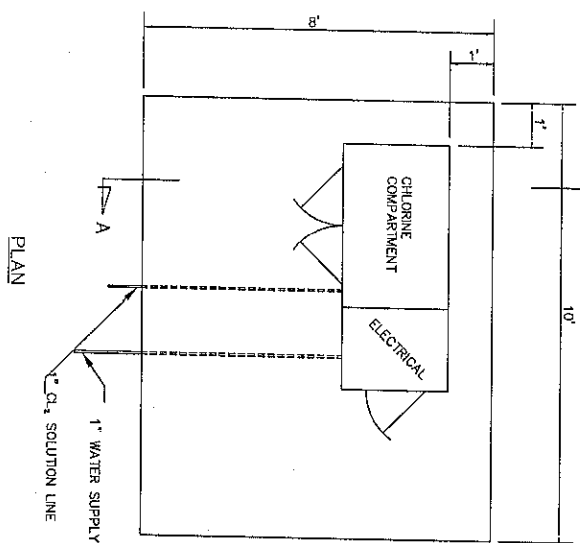
CHLORINE SCHEMATIC 5  
SCALE: N.T.S. WP2



- NOTES:
- 1 CHLORINE HOUSE TO BE BEYCO MODEL 7521-F OR EQUAL
  - 2 CHLORINATOR SHALL BE WALLACE AND TERRAN VOR OR EQUAL
  - 3 BOOSTER PUMP AND CHLORINE SCALES SHALL BE SUPPLIED BY CHLORINATION EQUIPMENT SUPPLIER
  - 4 PUMP SHALL BE 1/2 HP 115V 60 HZ 1700 RPM
  - 5 WELL PUMP FLOW RATE IS 1700 GPM
  - 6 STATIC PRESSURE AT WELL HEAD IS 82 PSI BASED ON RESERVOIR ELEVATION OF 2750



SECTION A-A



NOTES:

- 1 SEE SCHEMATIC FOR CHLORINATION EQUIPMENT INFORMATION DETAIL 5-WP2

CHLORINE HOUSE 4  
SCALE: N.T.S. WP2

PRELIMINARY  
NOT FOR CONSTRUCTION

RHODES HOMES ARIZONA, LLC

GOLDEN VALLEY RANCH WELL #1  
DETAILS

MOHAVE COUNTY

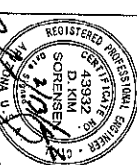
ARIZONA

  
5820 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89119  
(702) 369-9396 Fax (702) 369-9793  
www.stanleygroup.com

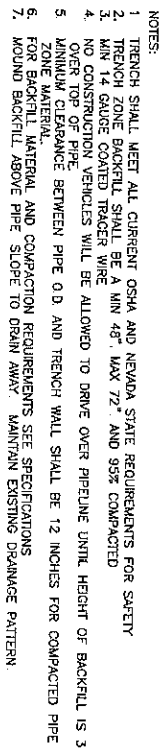
**Stanley Consultants INC.**

SCALE (H) 1" = 20'  
SCALE (V) NA  
DRAWN BY B. Curtis  
CHECKED BY  
DATE 02-01-2006

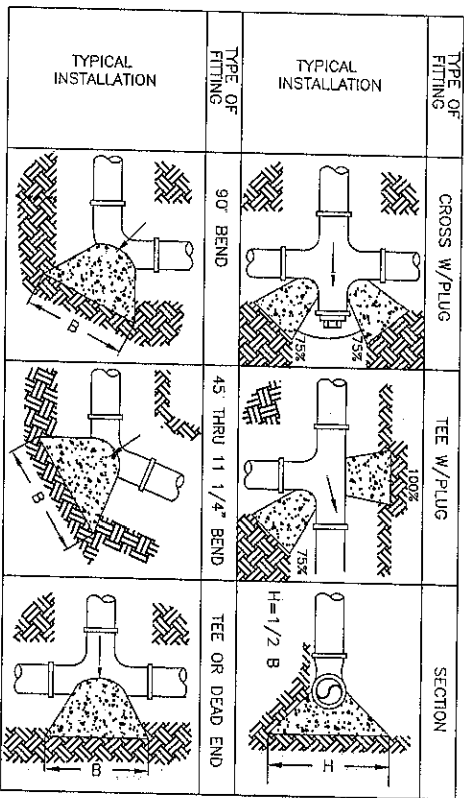
REV. NO.	DESCRIPTION	DRAWN BY	APPROVAL	DATE







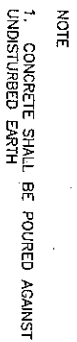
SCALE: N T S.



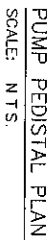
THRUST BLOCK BEARING AREA (SQ. FT.)						
TYPE OF FITTING	11.25" BEND	22.5" BEND	45° BEND	90° BEND	TEE OR PLUG	
4"	0.4	0.7	1.4	2.7	1.9	
6	0.8	1.7	3.2	6.0	4.2	
8	1.5	2.9	5.8	10.7	7.5	
10	2.3	4.6	9.0	16.7	11.8	
12	3.3	6.6	13.0	24.0	17.0	
14	4.5	9.0	17.7	32.7	23.1	
16	5.9	11.8	23.1	42.7	30.2	
18	7.5	14.9	29.2	54.0	38.2	

1. NOTE:
2. ALL WORK MUST BE INSPECTED PRIOR TO BACKFILL.
3. 1. CONSTRUCT THRUST BLOCKS W/ 2000 PSI CONCRETE - CURE MINIMUM 5 DAYS.
4. 2. CONSTRUCT THRUST BLOCKS ON 150 PSI TEST PRESSURE AND 1500 PSI BEARING CAPACITY.
5. 3. BEARING CAPACITY TESTS SHALL BE CONDUCTED PRIOR TO CONSTRUCTION OF THRUST BLOCKS.
6. 4. THRUST BLOCKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN ON PLANS TAKE PRECEDENCE.
7. 5. THRUST BLOCKS SHALL BE CONSTRUCTED WITH 8" UNIDIRECTIONAL SO.
8. 6. WRAP ALL METAL FITTINGS WITH 8" MIL POLYETHYLENE FILM AFTER APPLYING 2 FIELD COATS OF NO-OXIDE.
9. 7. WAX TO NUTS & BOLTS BEFORE POURING THRUST BLOCKS.
10. 8. INSTALLATIONS USING DIFFERENT PIPE, TEST PRESSURES, AND/OR BEARING CAPACITIES ADJUST AREAS.
11. 9. CONTRACTOR SHALL ADJUST THRUST BLOCKS IN AREAS WHERE TEST AND OPERATING PRESSURES EXCEED
12. DESIGNED TEST PRESSURE.

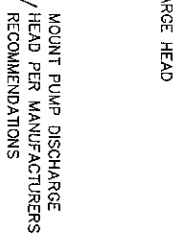
## SCALE: N.T.S.



SCALE: N.T.S.



SCALE: N T S

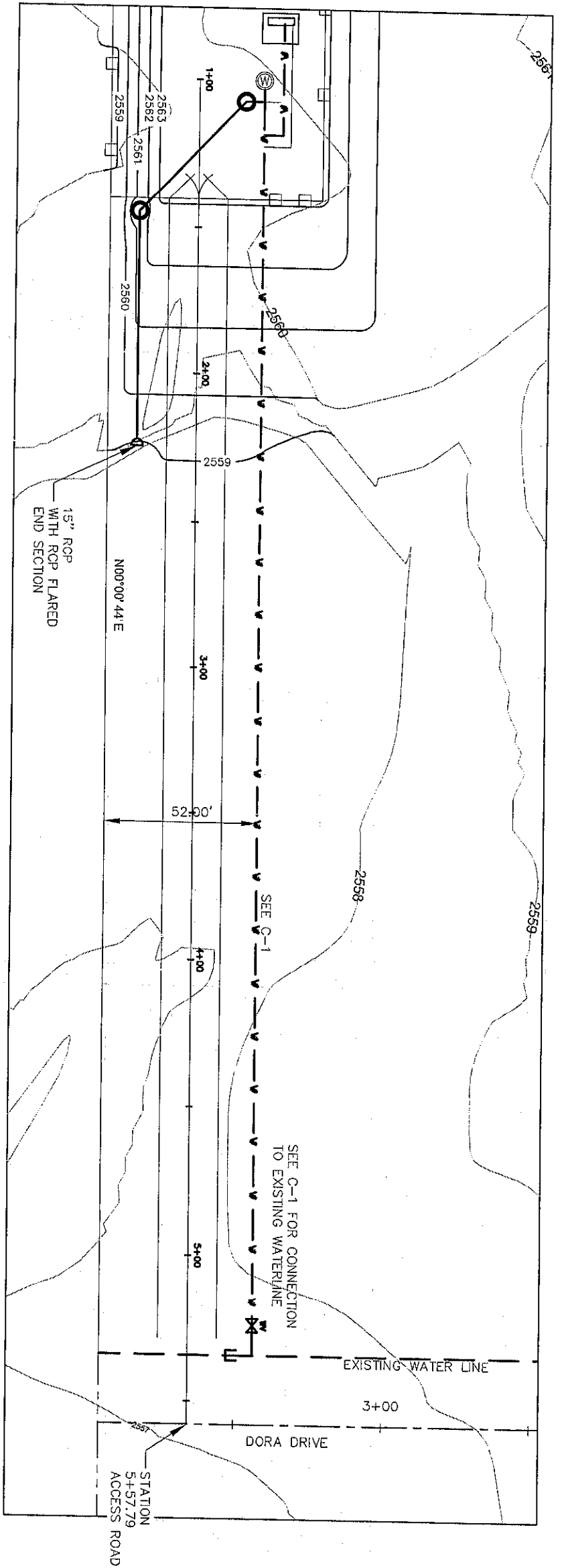


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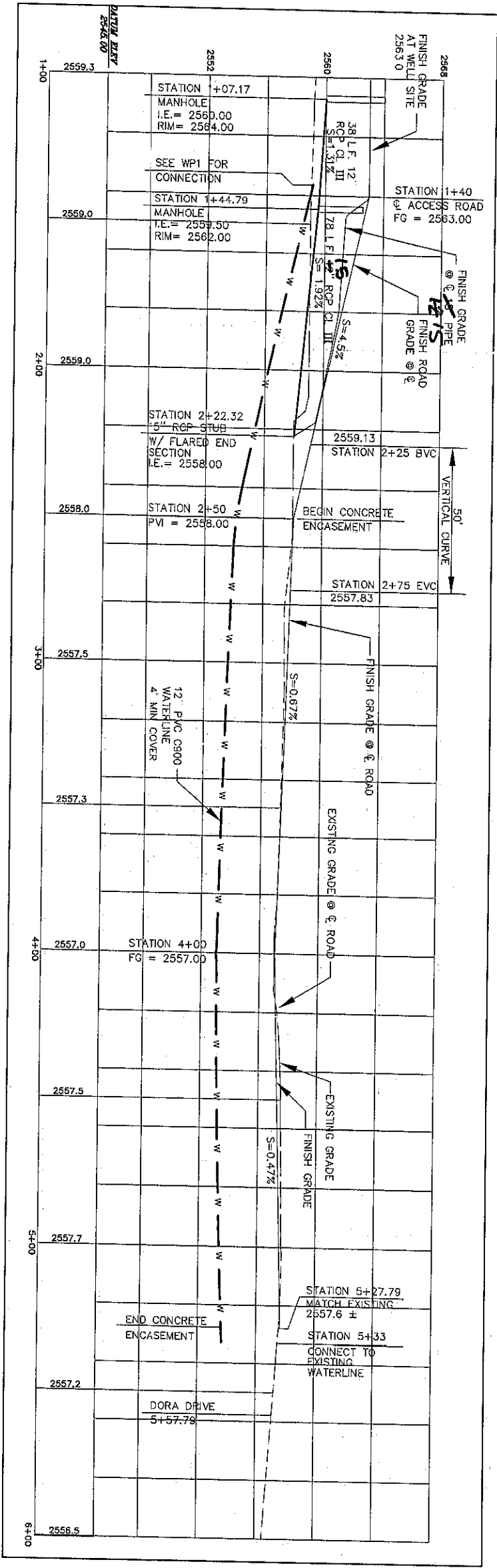
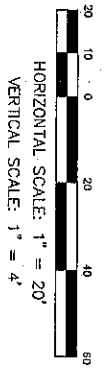


## SCALE: N T S.





PRELIMINARY  
NOT FOR CONSTRUCTION



PROFILE

NOTE:  
ENCASE WATERLINE IN CONCRETE BELOW  
WASH SEE 4-WP3 FOR ENCASEMENT DETAIL.

RHODES HOMES ARIZONA, LLC

GOLDEN VALLEY RANCH WELL #1  
DISCHARGE PIPE PLAN AND PROFILE

MOHAVE COUNTY

ARIZONA



5820 S. Eastern Avenue, Suite 200  
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www.stanleygroup.com

Stanley Consultants INC.

SCALE (H)

SCALE (V) NA

DRAWN BY MB

CHECKED BY DKS

DATE 02-01-2006

REV. NO.	DESCRIPTION	DRAWN BY	APPROVED	DATE



DWG FILE: 1175\_0\_E001.dwg 8:04am PLOTTED: Mar 07, 2006 gfron

SCHEMATIC DIAGRAM SYMBOLS			POWER SINGLE LINE DIAGRAM SYMBOLS			ELECTRICAL ABBREVIATIONS			
	CONTROL RELAY		2 POSITION SELECTOR SWITCH POSITION LEGEND: X=CLOSED 0=OPEN		JUNCTION BOX WITH POWER DISTRIBUTION BLOCK OR LUGS		AMP CIRCUIT BREAKER SHOWN WITH TRIP RATING AND NUMBER OF POLES		ADJUSTABLE FREQUENCY DRIVE
	TIME DELAY RELAY		3 POSITION SELECTOR SWITCH POSITION LEGEND: X=CLOSED 0=OPEN		CONDUIT SEALOFF		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	ALARM RELAY		NORMALLY CLOSED PUSH BUTTON		LTC CONNECTION		AMP DISCONNECT SWITCH SHOWN WITH RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	ELAPSED TIME METER		LOCKOUT STOP PUSH BUTTON		MC CONNECTION		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	MOTOR STARTER OR CONTACTOR COIL		NORMALLY OPEN PUSH BUTTON		BOND TO METALLIC WATER PIPE		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	PHOTO CELL		EMERGENCY STOP PUSH BUTTON (MAINTAINED)		UTILITY METER		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	REDUCED ALARM LIGHT LETTER INDICATES COLOR B=BLUE G=GREEN		DISCONNECT SWITCH SHOWN WITH RATING AND NUMBER OF POLES		VARIABLE FREQUENCY DRIVE		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	PILOT LIGHT LETTER INDICATES COLOR B=BLUE G=GREEN		LIMIT OR POSITION SWITCH		HARMONIC FILTER		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	OUTPUT DV/DI FILTER		PRESSURE SWITCH HIGH		ELECTRONIC OVERLOAD RELAY		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	HEATING ELEMENT		PRESSURE SWITCH LOW		GROUND CONNECTION		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	TRANSFORMER		FLOW SWITCH		MOTOR, NUMBER DESIGNATES MINIA HOMEPER SIZE		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	CURRENT TRANSFORMER		LEVEL FLOAT SWITCH		FUSE		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	GROUND CONNECTION		TIMER RELAY CONTACT INSTANTANEOUS CLOSE TIME DELAY OPEN		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	GENERATOR		TIMER RELAY CONTACT NORMALLY OPEN TIME DELAY CLOSE		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	HORN		TEMPERATURE SWITCH		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	FULL VOLTAGE NON-REVERSING (FVNR) MOTOR STARTER OR CONTACTOR NUMBER DESIGNATES MINIA HOMEPER SIZE		FUSE		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	NORMALLY OPEN CONTACT		FUSEHOLDER OR FUSEBLOCK		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	NORMALLY CLOSED CONTACT		THERMAL OVERLOAD RELAY		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	RTU OR PLC CONTACT		TERMINAL BLOCK		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	CONDUIT SEALOFF		DEVICE LOCATED AT REMOTE LOCATION		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK
	CONDUIT SEALOFF		CONDUIT SEALOFF		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		AMP MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES		LOCAL AREA NETWORK

SITE PLAN SYMBOLS			
	TELEPHONE OUTLET		FIELD DEVICE
	SINGLE POLE SWITCH		GROUND ROD
	3 WAY SWITCH		DUPLEX RECEPTACLE
	4-WAY SWITCH		ANTENNA MAST
	MANUAL MOTOR STARTER		CONDUIT SEALOFF
	SPECIAL PURPOSE OR WELDING OUTLET		DISCONNECT SWITCH
	SMOKE DETECTOR		MOTOR
	THERMOSTAT		

ELECTRICAL UNETYPES		
	EXPOSED CONDUIT	
	EXISTING EXPOSED CONDUIT	
	UNDERGROUND CONDUIT	
	EXISTING UNDERGROUND CONDUIT	
	BARE COPPER GROUND CONDUCTOR	
	EXISTING OR FUTURE	
	NEW ELECTRICAL EQUIPMENT	
	DEMOLITION	
	DETAIL VIEW OR MATCHING	
	CAPPED CONDUIT STUB OUT	

GENERAL NOTES		
1	THE COMPLETED INSTALLATION SHALL COMPLY WITH LATEST REVISION OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES, AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSURANCE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE.	
2	VISIT THE SITE PRIOR TO BECOMING FAMILIAR WITH EXISTING CONDITIONS AND OTHER FACTORS, WHICH MAY AFFECT THE EXECUTION OF THE WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.	
3	THE CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITIES PROVIDING SERVICES ON THIS PROJECT AND SHALL COMPLY WITH ALL THEIR INSTALLATION REQUIREMENTS.	
4	ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH THE LATEST REVISION OF NEMA, ANSI, UL, OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURERS' NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE QUALITY APPEARANCE, USEFULNESS, AND BID PRICE.	
5	PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES. WEATHER CONDITIONS, OR ANY OTHER PREVENTABLE CAUSES. EQUIPMENT DAMAGED DURING SHIPPING OR CONSTRUCTION, PRIOR TO ACCEPTANCE BY THE ENGINEER OR THE OWNER, WILL BE REJECTED AS DEFECTIVE.	
6	LEAVE THE SITE CLEAN. REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAP, AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL MATERIALS SHALL BE PROPERLY DISPOSED OF AND REMOVED FROM THE SITE. ALL MATERIALS SHALL BE PROPERLY DISPOSED OF AND REMOVED FROM THE SITE. ALL MATERIALS SHALL BE PROPERLY DISPOSED OF AND REMOVED FROM THE SITE.	
7	CIRCUIT CONDUCTORS #6 AWG OR SMALLER SHALL BE THIN STRANDED COPPER. #4 AWG THROUGH #2 AWG SHALL BE XHHW-2 STRANDED COPPER. #1 AWG OR LARGER SHALL BE XHHW-2 STRANDED COPPER. MINIMUM POWER CONDUCTOR SIZE SHALL BE #12 AWG WITH #12 AWG GROUND.	
8	UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. MINIMUM CONDUIT DEPTH SHALL BE 24 INCHES. MINIMUM UNDERGROUND CONDUIT SIZE SHALL BE 1 INCH.	
9	CONDUITS SHALL BE MARKED AT EACH END WITH MATCHING NUMBERED BRASS TAPS. SPARE CONDUITS SHALL HAVE A PULL STRING INSTALLED SECURED AND CAPPED.	
10	EXPOSED CONDUITS SHALL BE GALVANIZED RIGID STEEL (GRS). MINIMUM SIZE 3/4 INCH UNLESS OTHERWISE NOTED ON THE PLANS.	
11	SAFETY SWITCHES, ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, AND OTHER ELECTRICAL DEVICES SHALL BE UL LISTED AND RATED FOR HEAVY DUTY SERVICE.	
12	WIRING DEVICES SHALL BE SPECIFICATION GRADE.	
13	THE CONTRACTOR IS RESPONSIBLE FOR MANAGING, SCHEDULING, DOCUMENTING, AND PERFORMING THE WORK SO THAT A COMPLETE ELECTRICAL INSTRUMENTATION AND CONTROL SYSTEM FOR THE FACILITY IS PROVIDED. ACCURATE SHOP AND RECORD DRAWINGS AND O&M MANUALS SHALL BE SUBMITTED PRIOR TO FINAL ACCEPTANCE OF THE WORK.	
14	TYPICAL DETAILS SHALL APPLY IN ALL CASES, WHETHER SPECIFICALLY REFERRED TO OR NOT.	

CIRCUIT SCHEDULE LEGEND		
	SEQUENCE NUMBER	
	TYPE C=CONTROL	
	P=POWER	
	DEVICE SERVED	

**DL Engineering & Controls**  
3550 N. Central Ave. Ste. 1900 Phx., AZ 85012



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SHEET  
E001

7 OF 20 SHEETS

SC PROJECT#  
18449.07.03

RHODES HOMES ARIZONA, LLC

GOLDEN VALLEY RANCH WELL #1  
STANDARD ELECTRICAL SYMBOLS AND  
LEGEND

MOHAVE COUNTY ARIZONA

5826 S. Eastern Avenue, Suite 200  
Phoenix, AZ 85041  
(702) 569-9396 Fax (702) 569-9793  
www.stanleygroup.com

SCALE (H) NONE  
SCALE (V) NONE  
DRAWN BY GAF  
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DATE 3/7/2006

DATE  
BY  
CHECKED  
APPROVED

ST-RH038733







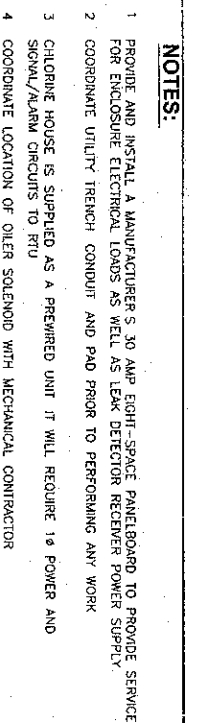
PANEL TAG NO. MP2-100										NEMA TYPE/ENCLOSURE									
LOCATION: ELECTRICAL EQUIPMENT LINEUP										MAIN DEWINTING 125A MCB									
BUS AMPACITY 125A										AIC RATING 10K									
VOLTS PHASE, WIRE 240 V/120V 1-PHASE, 3-WIRE										FED FROM PNL-100									
REMARKS: 25KVA MIN-POWER ZONE										ACCESSORIES									
LOAD VA										LOAD VA									
PHASE	PHASE	LOAD DESCRIPTION		WIRE SIZE	DEMAND	BKR	BKR NO.	BKR	DEMAND	WIRE SIZE	LOAD DESCRIPTION	PHASE A	PHASE B						
A	B			#6	1.25	30/1	1	2	1.25	#12	RTU CABINET AC UNIT NO.1	77/1	77/1						
360	20	CHLORINATION HOUSE- BEVCO		#12	1.25	20/1	3	4	1.25	#12	RTU CABINET AC UNIT NO.1		77/1						
0		WELL SITE FLOWMETER				20/1	5	6	1.25	#12	POLE LIGHTING	0							
0	360	SITE RECEPTACLES		#12	1.00	20/1	7	8	1.25	#12	SITE LIGHTING		990						
0		SPARE				20/2	9	10	1.25	#12	POLE QUALITY METER	240							
0	0	SPARE					11	12	1.25	#12	POLE RECEPTACLE		180						
77/1	77/1	SSS AC		#12	1.25	20/2	13	14	1.25	#12	RTU CABINET	150	0						
0		SSS AC		#12	1.25		15	16	1.25		SPARE	0							
0		SPACE				20/1	17	18	20/1		SPACE	0							
0	0	SPACE					19	20			SPACE	0	0						
0		SPACE					21	22			SPACE	0							
0	0	SPACE					23	24			SPACE	0	0						
437/1	115/1	CONNECTED VA									CONNECTED VA	1161	181/1						
5420	1427	DEMAND VA									DEMAND VA	1440	2370						

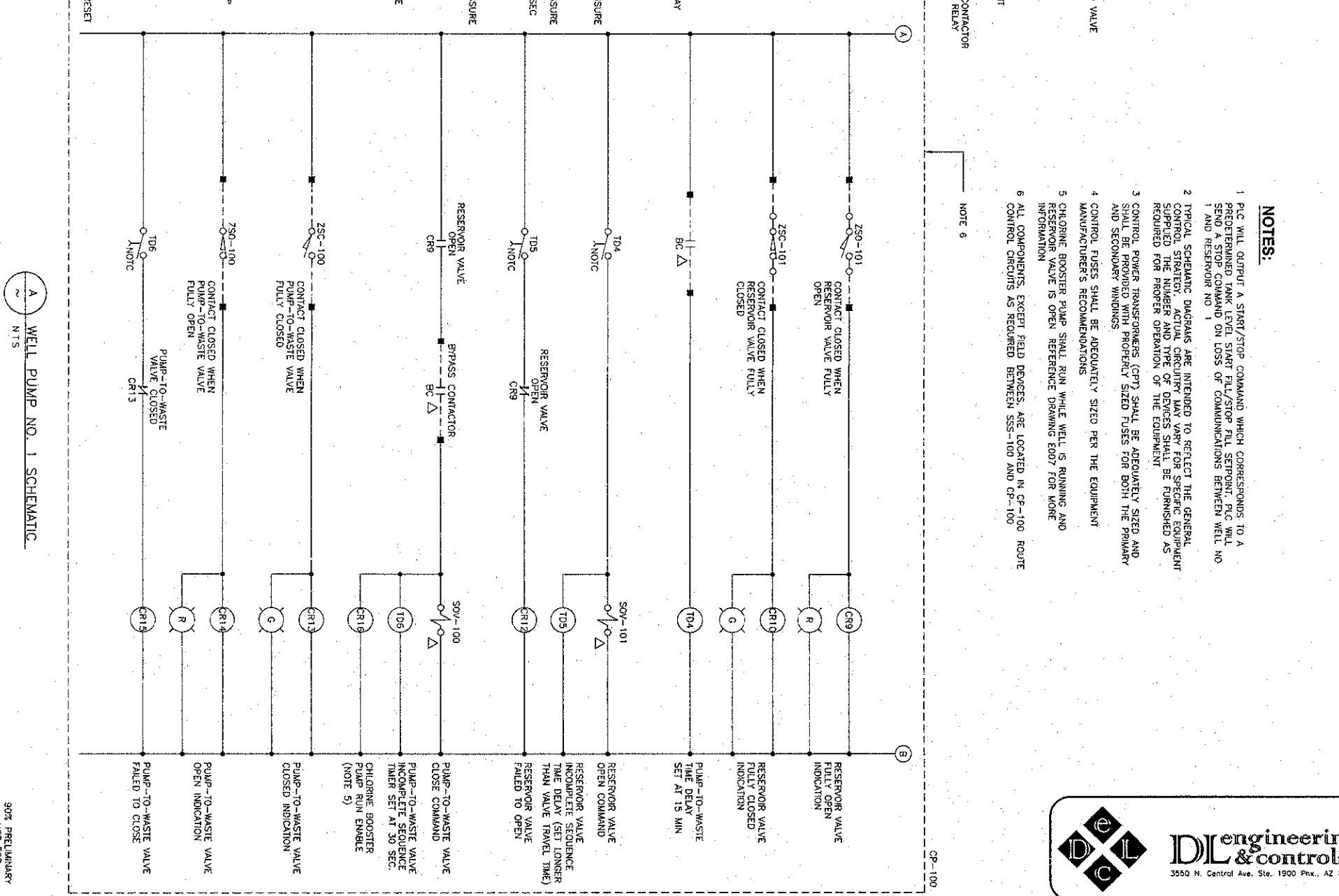
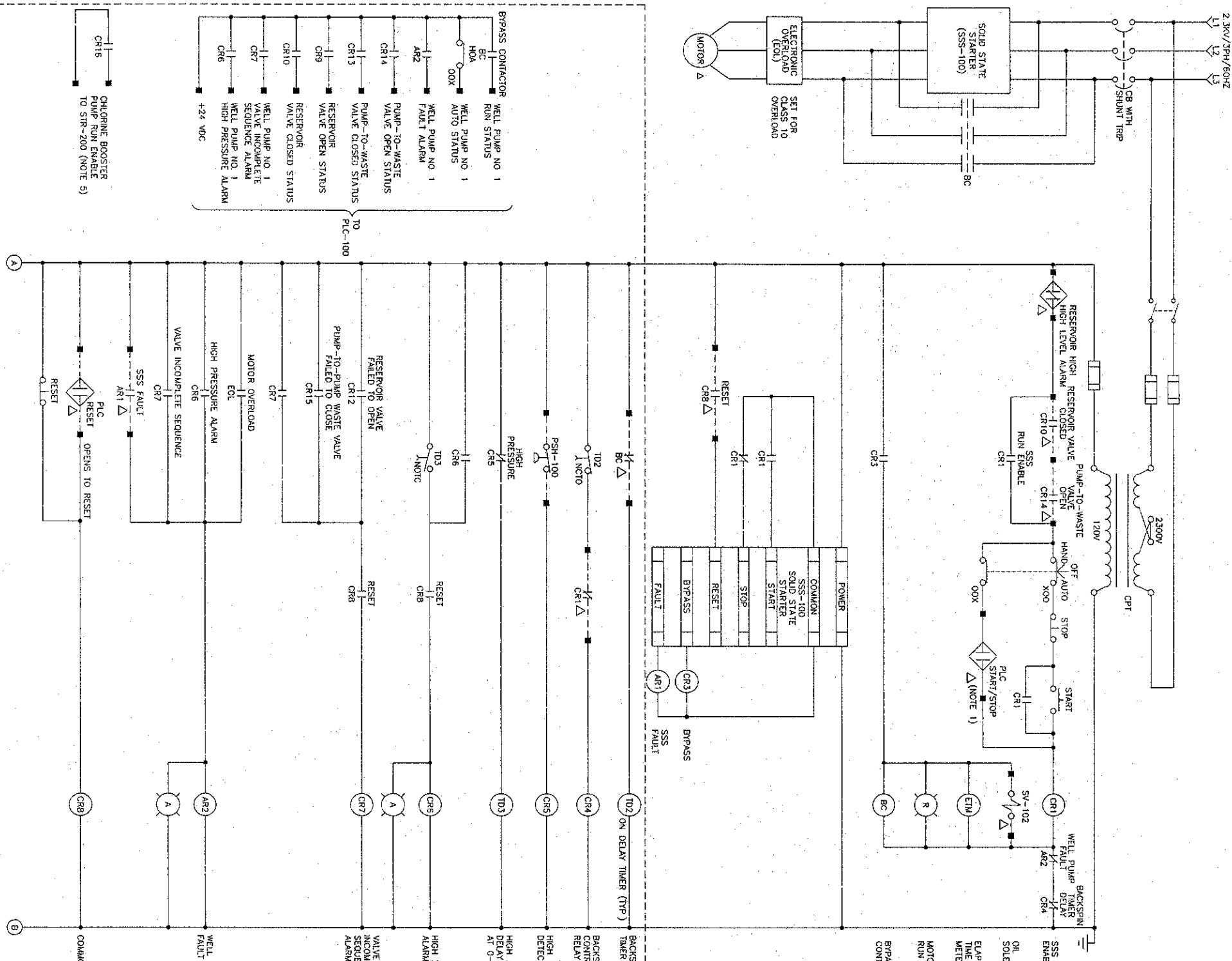
Each branch circuit Phase		TOTAL PANEL CONNECTED LOAD		TOTAL PANEL DEMAND LOAD		TOTAL PANEL DEMAND FACTOR	
CONDUCTOR	SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR	VA	AMPS	8654	35.81	10587	44.40
PANEL	PANEL	124%					

TOTAL CONNECTED VA - PER PHASE		TOTAL DEMAND VA - PER PHASE		TOTAL DEMAND PHASE AMPS	
5532	3092	8980	3737	57.2	31.6

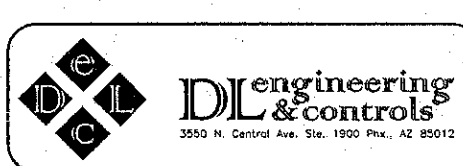
ISC(1)	$f = \frac{1.732}{1} \times \frac{25}{9033} \times \frac{4.974}{2300} = 0.0103$ $M = \frac{1}{1} + 0.0103 = 0.9996$
ISC(2)	$f = \frac{1.732}{2} \times \frac{25}{5033} \times \frac{4.974}{2300} = 0.0051$ $M = \frac{1}{1} + 0.0051 = 0.9949$
ISC(3)	$f = \frac{1.732}{1} \times \frac{25}{5033} \times \frac{4.949}{2300} = 0.0101$ $M = \frac{1}{1} + 0.0101 = 0.99$
ISC(4)	$f = \frac{1.732}{1} \times \frac{25}{1555} \times \frac{4.801}{2300} = 0.0681$ $M = \frac{1}{1} + 0.0681 = 0.9451$
ISC(5)	$f = \frac{3.583}{100300} \times \frac{4157}{X} \times \frac{3}{75} = 6.595$ $M = \frac{1}{1} + 5.959 = 0.144$
ISC(6)	$f = \frac{2400}{480} = 5$ $M = \frac{1}{1} + 0.0703 = 0.9297$
ISC(7)	$f = \frac{2}{2} \times \frac{25}{3825} \times \frac{2.580}{240} = 0.0703$ $M = \frac{1}{1} + 0.0703 = 0.9297$
ISC(8)	$f = \frac{2.580}{2.580} \times \frac{0.9343}{2.410} = 0.9343$ $M = \frac{1}{1} + 0.0681 = 0.9319$

SHEET  
E003  
9 OF 20 SHEETS  
SCI PROJECT#  
18449.07.03

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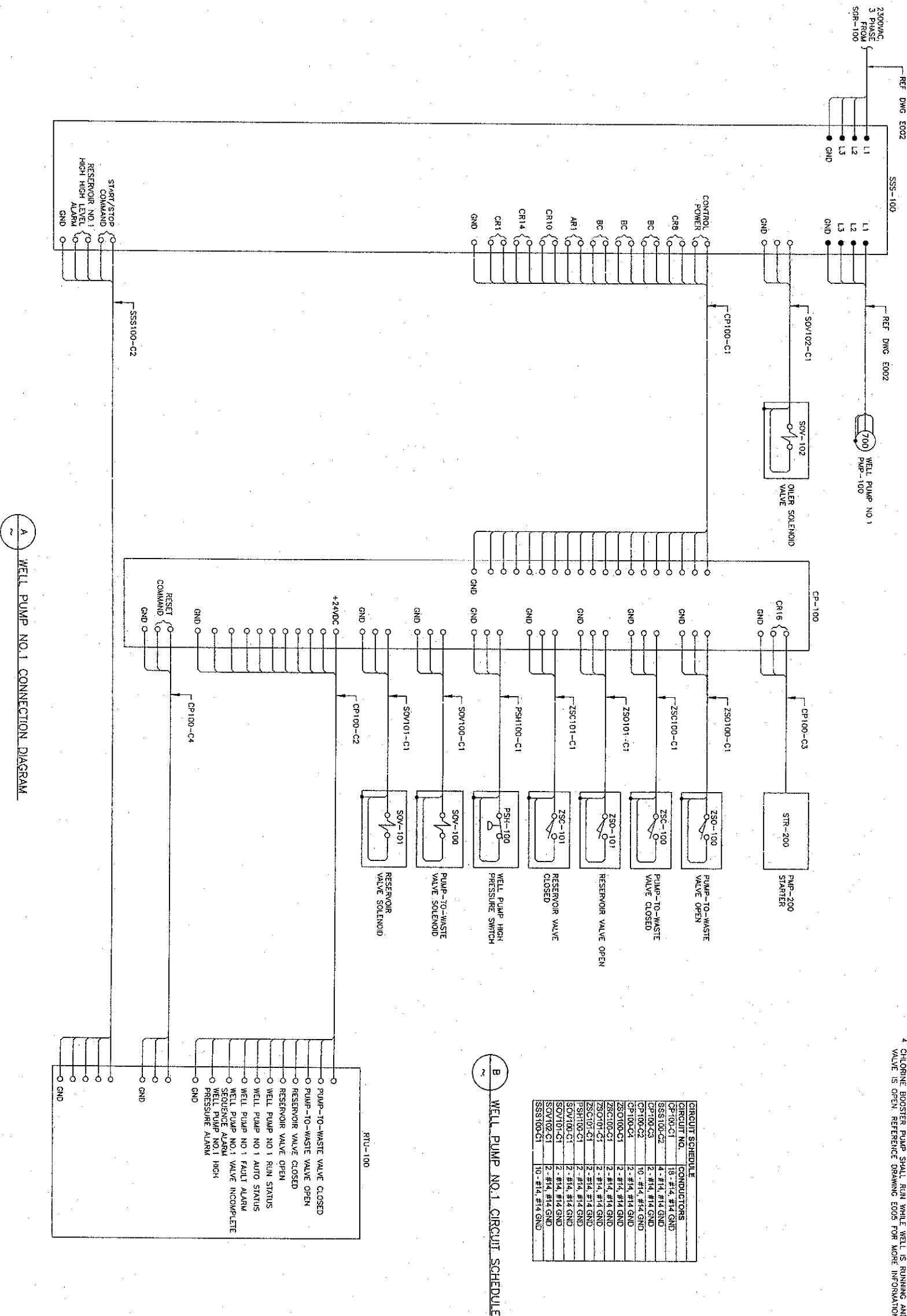


- NOTES:**
1. PLC WILL OUTPUT A START/STOP COMMAND WHICH CORRESPONDS TO A PREDETERMINED TANK LEVEL START/FILL/STOP. PLC WILL SEND A STOP COMMAND ON LOSS OF COMMUNICATIONS BETWEEN WELL NO. 1 AND RESERVOIR NO. 1.
  2. TYPICAL SCHEMATIC DIAGRAMS ARE INTENDED TO REFLECT THE GENERAL CONTROL STRATEGY. ACTUAL CIRCUITRY MAY VARY FOR SPECIFIC EQUIPMENT SUPPLIED FOR PROPER OPERATION OF THE EQUIPMENT.
  3. CONTROL POWER TRANSFORMERS (CPT) SHALL BE ADEQUATELY SIZED AND SHALL BE PROVIDED WITH PROPERLY SIZED FUSES FOR BOTH THE PRIMARY AND SECONDARY WINDINGS.
  4. CONTROL FUSES SHALL BE ADEQUATELY SIZED PER THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
  5. CHLORINE BOOSTER PUMP SHALL RUN WHILE WELL IS RUNNING AND RESERVOIR VALVE IS OPEN. REFERENCE DRAWING E007 FOR MORE INFORMATION.
  6. ALL COMPONENTS, EXCEPT FIELD DEVICES, ARE LOCATED IN CP-100 ROUTE CONTROL CIRCUITS AS REQUIRED BETWEEN SSS-100 AND CP-100.





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SHEET  
E006

12 OF 20 SHEETS

SCHEMATIC  
10/4/07/03

RHODES HOMES ARIZONA, LLC

GOLDEN VALLEY RANCH WELL #1  
SCHEMATIC/CONNECTION DIAGRAM  
- SHEET 2

MOHAVE COUNTY ARIZONA

5820 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89119  
(702) 369-9386 Fax (702) 369-9793  
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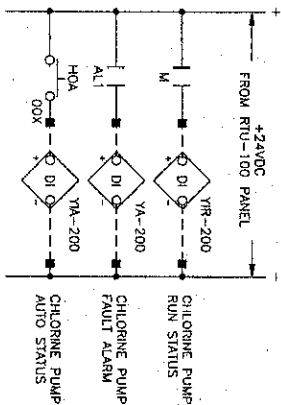
**Stanley Consultants INC.**

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SCALE (V) NONE  
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DATE 3/7/2006

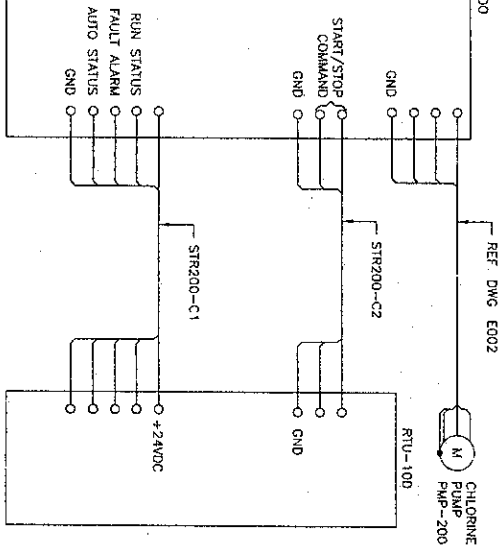
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REGISTERED PROFESSIONAL ENGINEER  
STATE OF ARIZONA  
No. 10443  
Exp. 12/31/08

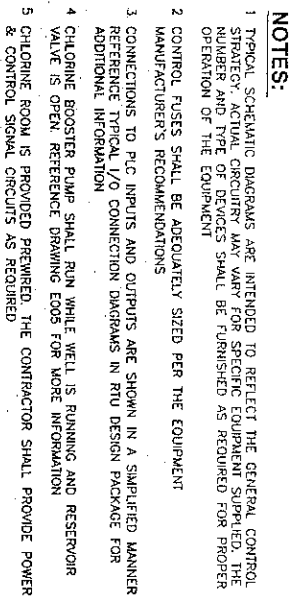
ST-RH038738



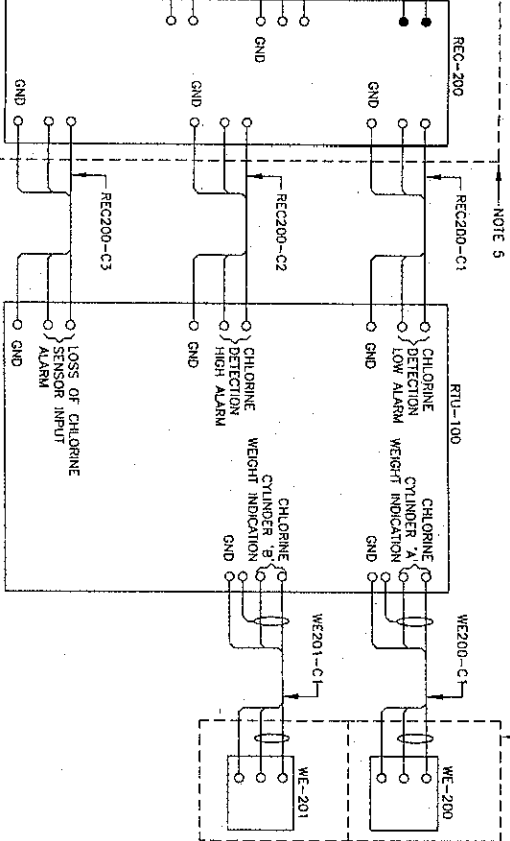
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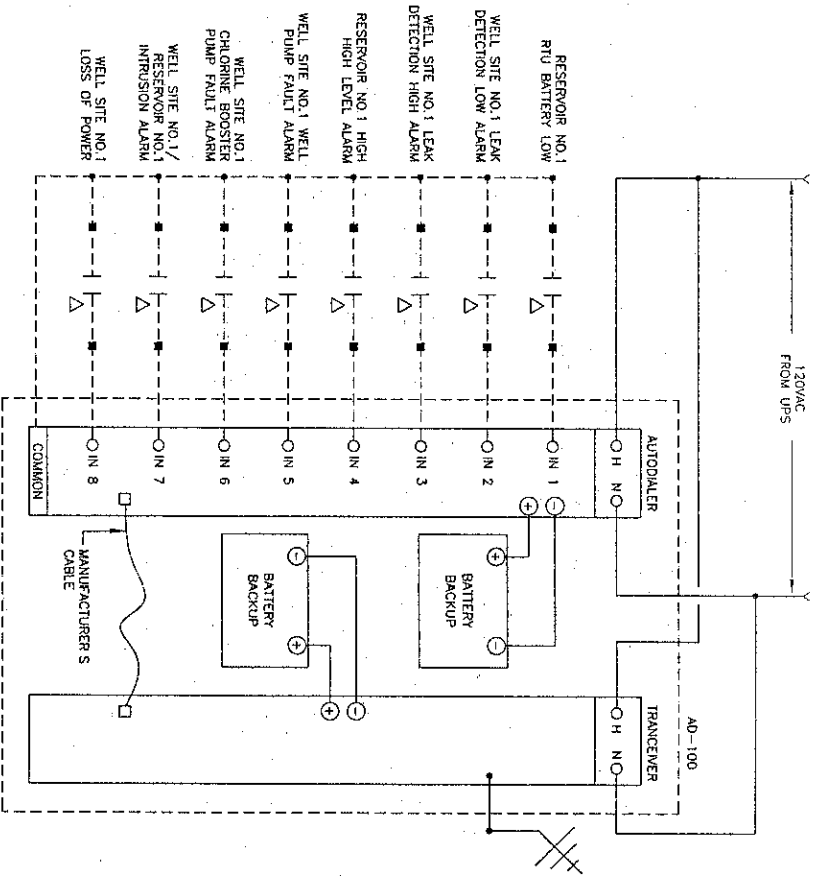


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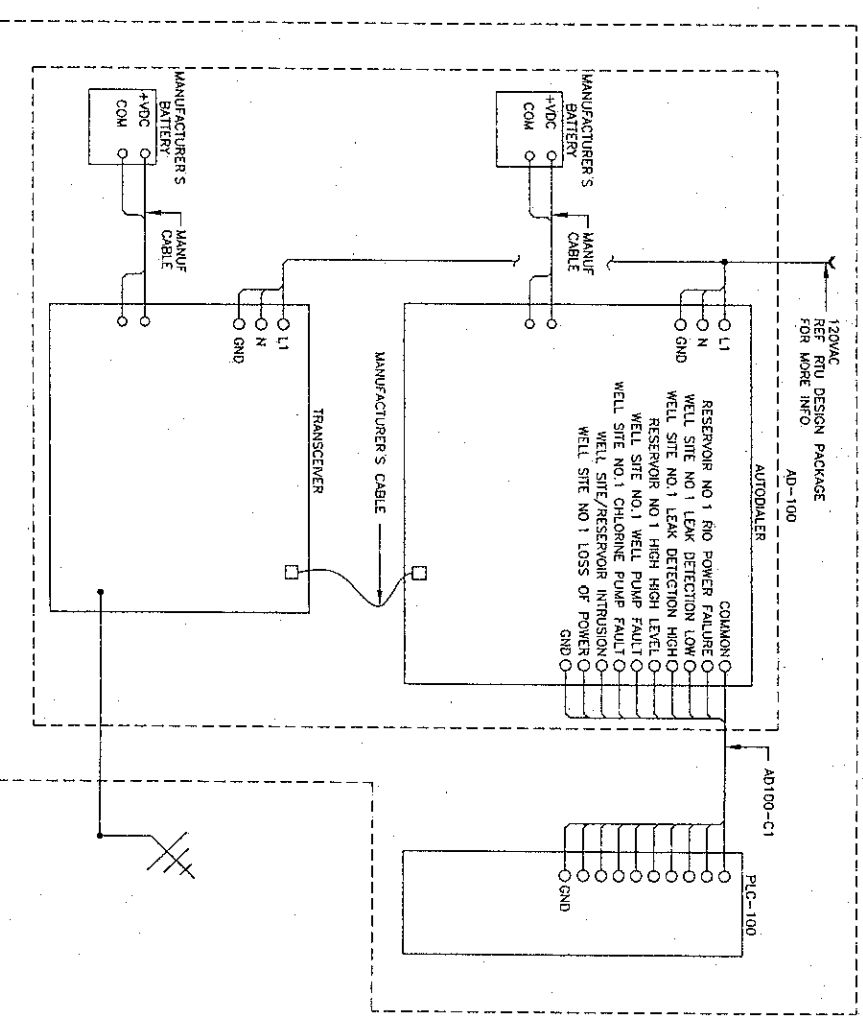
CHLORINATOR LEAK  
DETECTOR CONNECTION DIAGRAM

NTS

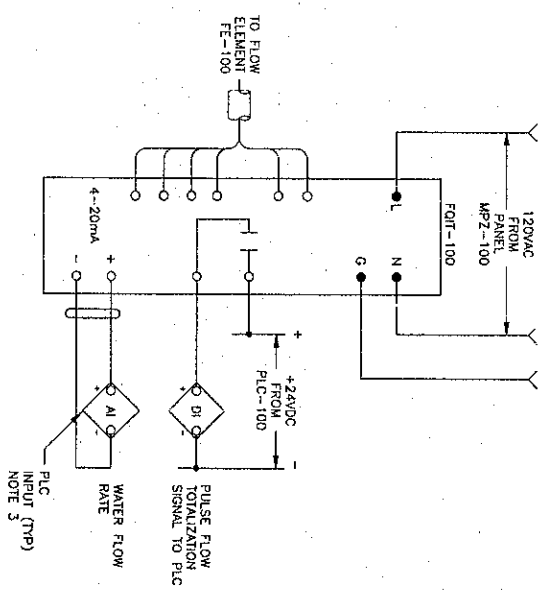
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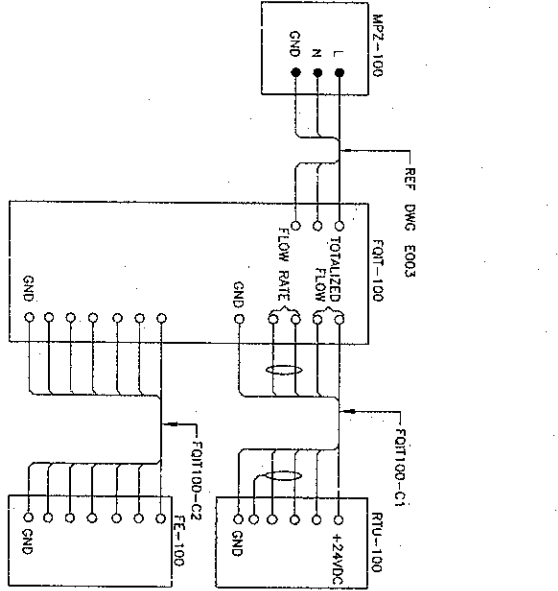
B AUTODIALER SCHEMATIC DIAGRAM



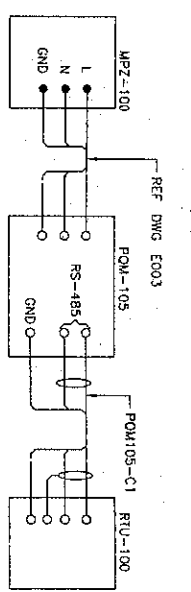
B1 AUTODIALER CONNECTION DIAGRAM



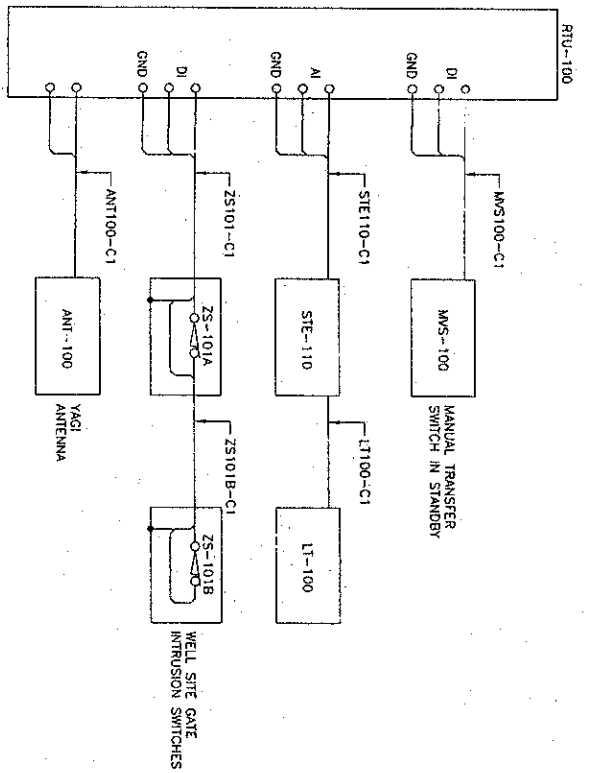
C FLOW TRANSMITTER SCHEMATIC (FOIT-100)



C1 FLOW TRANSMITTER CONNECTION DIAGRAM (FOIT-100)



D POWER QUALITY METER CONNECTION DIAGRAM (PQM-105)



E MISCELLANEOUS CONNECTION DIAGRAM

CIRCUIT SCHEDULE	
CIRCUIT NO.	CONDUCTORS
AUTODIALER	9 - #14 #14 GND
FOIT-100-C1	2 - #14 1-IC #14 GND
FOIT-100-C2	1 - MC #14 GND
FOIT-100-C3	1 - IC #14 GND
FOIT-100-C4	2 - #14 #14 GND
FOIT-100-C5	2 - #14 #14 GND
FOIT-100-C6	2 - #14 #14 GND
FOIT-100-C7	2 - #14 #14 GND
FOIT-100-C8	2 - #14 #14 GND
FOIT-100-C9	2 - #14 #14 GND
FOIT-100-C10	2 - #14 #14 GND
FOIT-100-C11	2 - #14 #14 GND
FOIT-100-C12	2 - #14 #14 GND
FOIT-100-C13	2 - #14 #14 GND
FOIT-100-C14	2 - #14 #14 GND
FOIT-100-C15	2 - #14 #14 GND
FOIT-100-C16	2 - #14 #14 GND
FOIT-100-C17	2 - #14 #14 GND
FOIT-100-C18	2 - #14 #14 GND
FOIT-100-C19	2 - #14 #14 GND
FOIT-100-C20	2 - #14 #14 GND
FOIT-100-C21	2 - #14 #14 GND
FOIT-100-C22	2 - #14 #14 GND
FOIT-100-C23	2 - #14 #14 GND
FOIT-100-C24	2 - #14 #14 GND
FOIT-100-C25	2 - #14 #14 GND
FOIT-100-C26	2 - #14 #14 GND
FOIT-100-C27	2 - #14 #14 GND
FOIT-100-C28	2 - #14 #14 GND
FOIT-100-C29	2 - #14 #14 GND
FOIT-100-C30	2 - #14 #14 GND
FOIT-100-C31	2 - #14 #14 GND
FOIT-100-C32	2 - #14 #14 GND
FOIT-100-C33	2 - #14 #14 GND
FOIT-100-C34	2 - #14 #14 GND
FOIT-100-C35	2 - #14 #14 GND
FOIT-100-C36	2 - #14 #14 GND
FOIT-100-C37	2 - #14 #14 GND
FOIT-100-C38	2 - #14 #14 GND
FOIT-100-C39	2 - #14 #14 GND
FOIT-100-C40	2 - #14 #14 GND
FOIT-100-C41	2 - #14 #14 GND
FOIT-100-C42	2 - #14 #14 GND
FOIT-100-C43	2 - #14 #14 GND
FOIT-100-C44	2 - #14 #14 GND
FOIT-100-C45	2 - #14 #14 GND
FOIT-100-C46	2 - #14 #14 GND
FOIT-100-C47	2 - #14 #14 GND
FOIT-100-C48	2 - #14 #14 GND
FOIT-100-C49	2 - #14 #14 GND
FOIT-100-C50	2 - #14 #14 GND
FOIT-100-C51	2 - #14 #14 GND
FOIT-100-C52	2 - #14 #14 GND
FOIT-100-C53	2 - #14 #14 GND
FOIT-100-C54	2 - #14 #14 GND
FOIT-100-C55	2 - #14 #14 GND
FOIT-100-C56	2 - #14 #14 GND
FOIT-100-C57	2 - #14 #14 GND
FOIT-100-C58	2 - #14 #14 GND
FOIT-100-C59	2 - #14 #14 GND
FOIT-100-C60	2 - #14 #14 GND
FOIT-100-C61	2 - #14 #14 GND
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FOIT-100-C74	2 - #14 #14 GND
FOIT-100-C75	2 - #14 #14 GND
FOIT-100-C76	2 - #14 #14 GND
FOIT-100-C77	2 - #14 #14 GND
FOIT-100-C78	2 - #14 #14 GND
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FOIT-100-C96	2 - #14 #14 GND
FOIT-100-C97	2 - #14 #14 GND
FOIT-100-C98	2 - #14 #14 GND
FOIT-100-C99	2 - #14 #14 GND
FOIT-100-C100	2 - #14 #14 GND

F CIRCUIT SCHEDULE

- NOTES:
1. TYPICAL SCHEMATIC DIAGRAMS ARE INTENDED TO REFLECT THE GENERAL CONTROL STRATEGY. ACTUAL CIRCUITRY MAY VARY FOR SPECIFIC EQUIPMENT SUPPLIED. THE NUMBER AND TYPE OF DEVICES SHALL BE FURNISHED AS REQUIRED FOR PROPER OPERATION OF THE EQUIPMENT.
  2. CONTROL FUSES SHALL BE ADEQUATELY SIZED PER THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
  3. CONNECTIONS TO PLC INPUTS AND OUTPUTS ARE SHOWN IN A SIMPLIFIED MANNER. REFERENCE TYPICAL I/O CONNECTION DIAGRAMS IN RTU DESIGN PACKAGE FOR ADDITIONAL INFORMATION.



14 OF 20 SHEETS

SHEET

E008

SG PROJECT

04/10/03

RHODES HOMES ARIZONA, LLC

GOLDEN VALLEY RANCH WELL #1

SCHEMATIC/CONNECTION DIAGRAM

- SHEET 4

MOHAVE COUNTY

ARIZONA

Stanley Consultants INC.

5820 S. Eastern Avenue, Suite 200

Las Vegas, Nevada 89119

(702) 369-9396 Fax (702) 369-9793

www.stanleygroup.com

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SCALE (V) NONE

DRAWN BY GAF

CHECKED BY BDD

DATE 3/7/2006

APPROVED

DRAWN BY

DATE

REGISTERED PROFESSIONAL ENGINEER

STATE OF ARIZONA

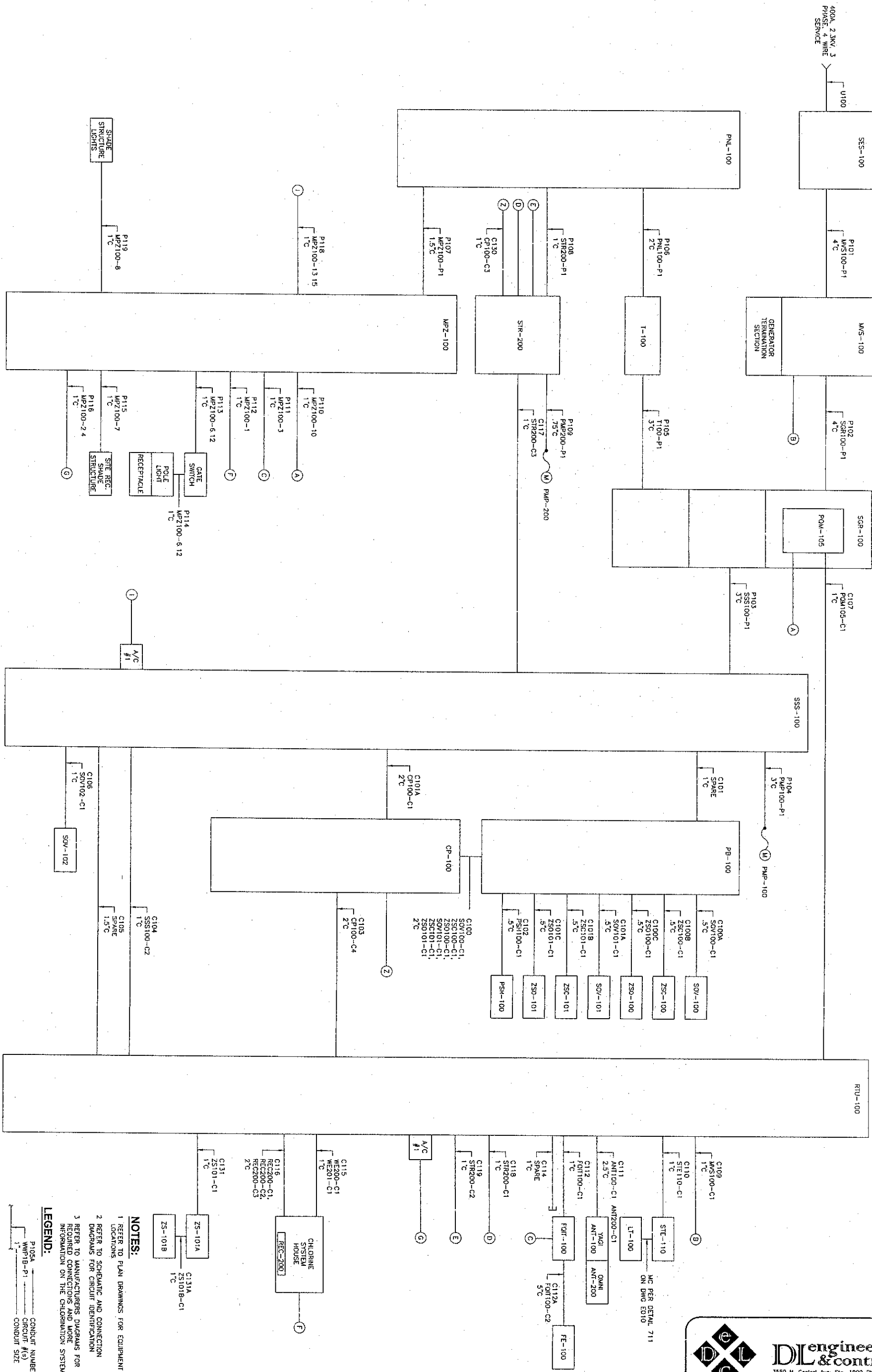
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STANLEY CONSULTANTS INC.



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E009

15 OF 20 SHEETS

SC PROJECT#  
184490703

RHODES HOMES ARIZONA, LLC

GOLDEN VALLEY RANCH WELL #1  
CONDUIT BLOCK DIAGRAM

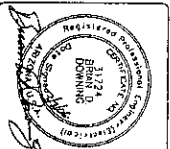
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ARIZONA

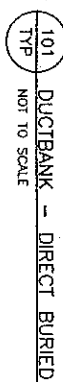
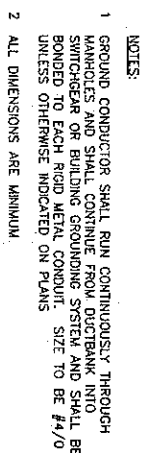
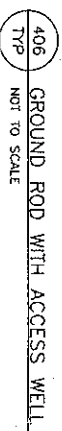
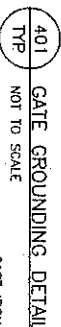
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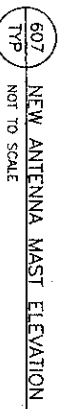
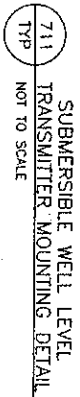
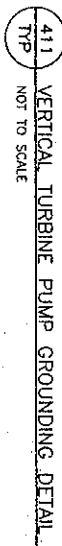
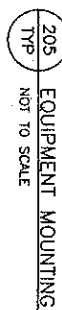
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DATE 3/7/2006

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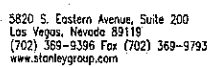
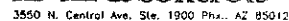
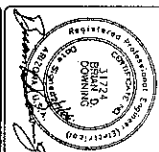




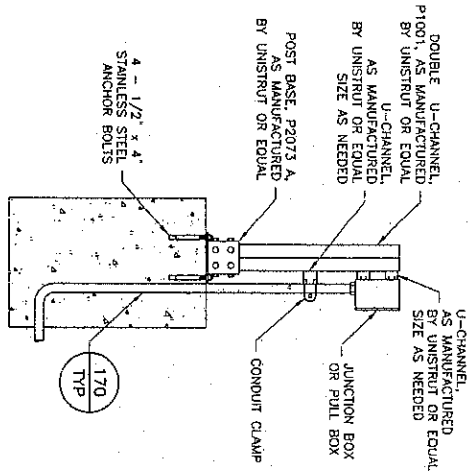
- 1 WHERE CONDUITS ARE INSTALLED IN A CONCRETE SLAB THE 24" DIMENSION DOES NOT APPLY. CONDUITS SHALL BE INSTALLED BETWEEN REBAR MATS OR UNDER A SINGLE REBAR MAT
- 2 IN CORROSE AREAS PVC COATED GRP SHALL BE USED
- 3 MOUNT INSTRUMENT AS PER MANUFACTURERS RECOMMENDATIONS
- 4 INSULATE WATER LINES AND TRANSMITTER TO PREVENT FREEZING.



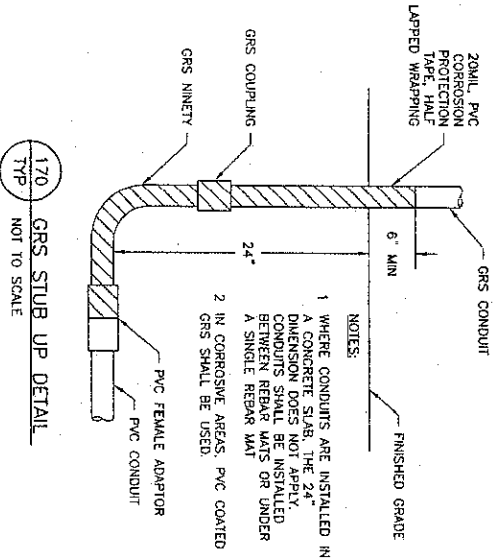
1. EXACT DIMENSIONS FOR A AND B SHALL BE COORDINATED WITH OWNER PRIOR TO INSTALLATION.
2. MOUNTING AND ALIGNING OF THE YAGI-TYPE ANTENNA, THE CONTRACTOR SHALL COORDINATE ANTENNA INSTALLATION, ALIGNMENT, AND TUNING REQUIREMENTS WITH THE MANUFACTURER.
3. MUST SHALL BE APPROVED BY A REGISTERED STRUCTURAL ENGINEER.

[illegible]

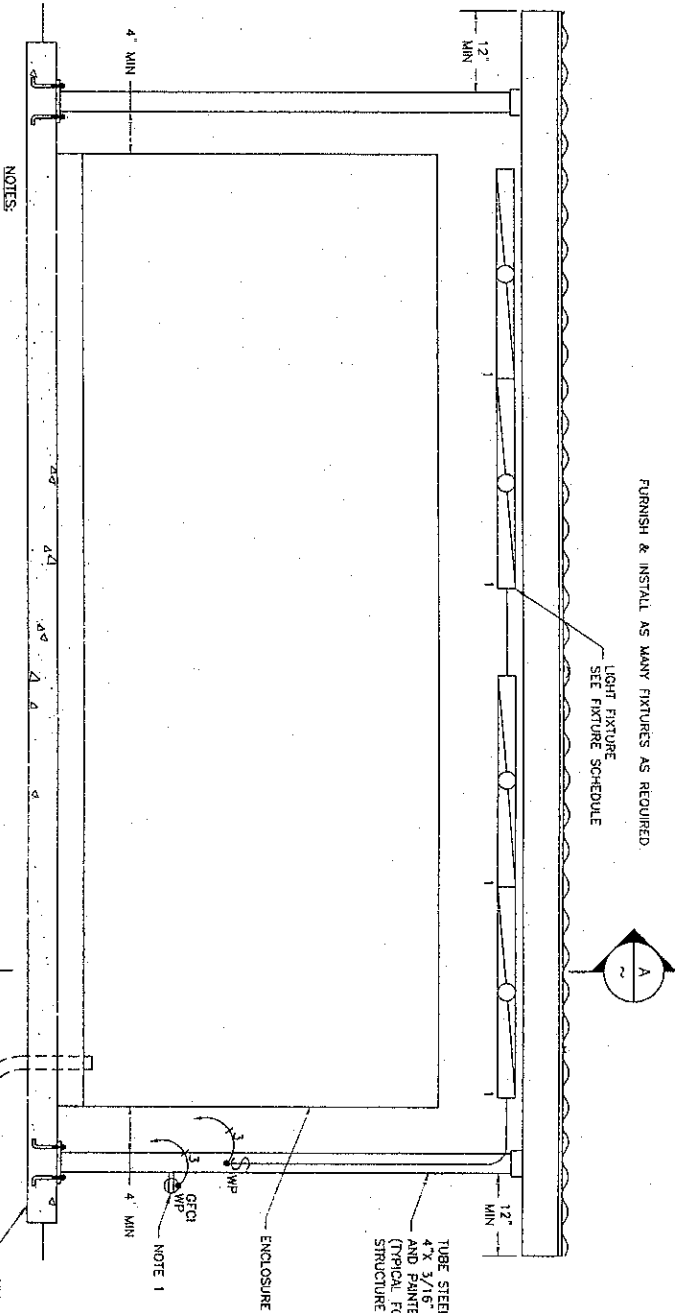
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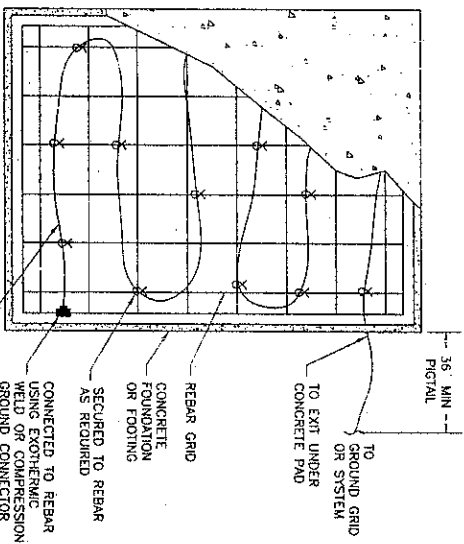
202 JUNCTION BOX MOUNTING DETAIL  
TYP NOT TO SCALE



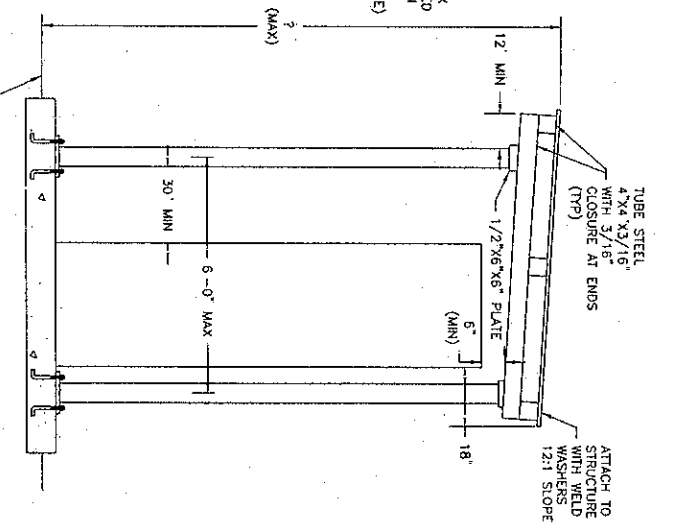
170 GRS STUB UP DETAIL  
TYP NOT TO SCALE



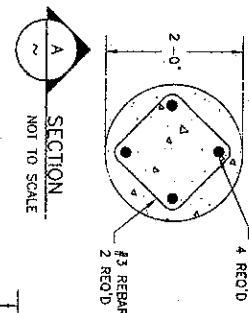
800 EQUIPMENT SHADE STRUCTURE ELEVATION  
TYP NOT TO SCALE



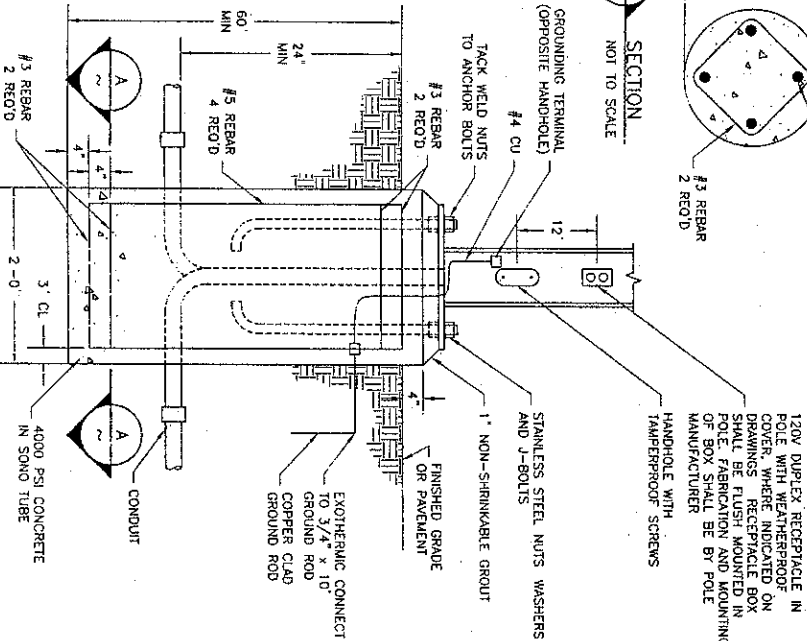
402 UFER\"/>



SECTION  
NOT TO SCALE



SECTION  
NOT TO SCALE

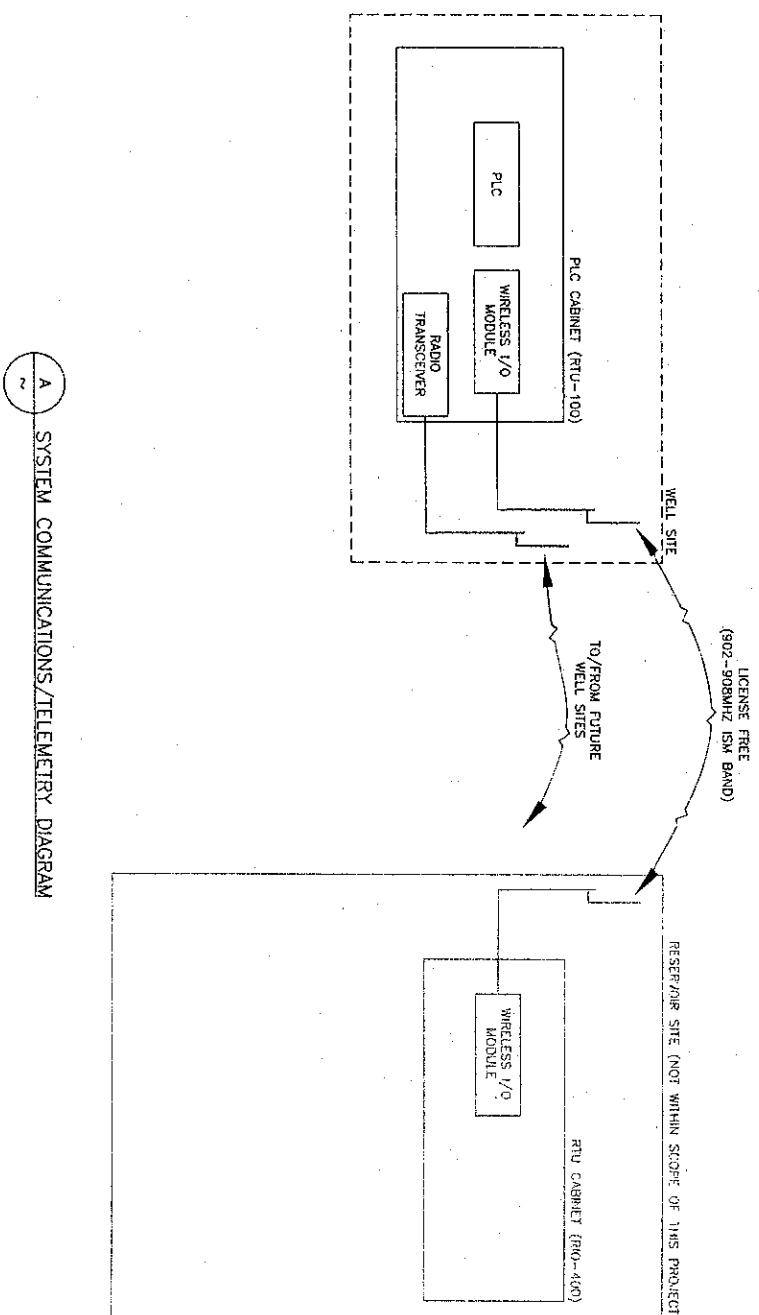


501 AREA LIGHTING POLE MOUNTING SHORT BASE  
TYP NOT TO SCALE



RHODES HOMES ARIZONA, LLC		GOLDEN VALLEY RANCH WELL #1 STANDARD DETAILS - SHEET 2		MOHAVE COUNTY ARIZONA	
Stanley Consultants INC.		5820 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89115 (702) 369-9795 Fax (702) 369-9793 www.stanleygroup.com		SCALE (H) NONE SCALE (V) NONE DRAWN BY GAF CHECKED BY BDD DATE 3/7/2006	
SHEET E011 17 OF 20 SHEETS 501 PROJECT# 18449.07.03		90% PRELIMINARY NOT FOR CONSTRUCTION		REV. NO. DESCRIPTION	





A  
2  
SYSTEM COMMUNICATIONS/TELEMETRY DIAGRAM



90% PRELIMINARY  
NOT FOR  
CONSTRUCTION

SHEET <b>E012</b> 18 OF 20 SHEETS SCI PROJECT # 18449.07.03	RHODES HOMES ARIZONA, LLC	 5820 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89119 (702) 369-9396 Fax (702) 369-9793 www.stanleygroup.com	SCALE (H) NONE	<table border="1"><tr><td>REV. NO.</td><td>DESCRIPTION</td><td>DRAWN BY</td><td>APPROVAL</td><td>DATE</td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>	REV. NO.	DESCRIPTION	DRAWN BY	APPROVAL	DATE																				
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GOLDEN VALLEY RANCH WELL #1 SYSTEM COMMUNICATIONS ARCHITECTURE MOHAVE COUNTY ARIZONA	DATE 3/7/2006	CHECKED BY BDO																											
DRAWN BY GAF																													
SCALE (V) NONE																													
5820 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89119 (702) 369-9396 Fax (702) 369-9793 www.stanleygroup.com																													










DWG FILE: 1175.00.101\_EC01.dwg 8:34am PLOTTED: Mar 07, 2006 gfran

MOHAVE COUNTY, AZ.  
GOLDEN VALLEY RANCH  
WELL NO. 1  
RTU DESIGN  
RTU-100

 DL Engineering & Controls 3550 N. Central Ave. Ste. 1900 Phtx., AZ 85012		 Stanley Consultants INC. 5820 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89119 (702) 369-9396 Fax (702) 369-9793 www.stanleygroup.com	
		NOTES 90% PRELIMINARY	
REVISIONS			
REV.	BY	DATE	DESCRIPTION
GOLDEN VALLEY RANCH WELL #1 RHODES HOMES ARIZONA, LLC MOHAVE COUNTY, AZ			
COVER SHEET			
DRAWN BY: GAF		PROJECT NO. 1175.00.101	
DESIGNED BY: GAF		SUBMITAL DATE: MARCH 2006	
CHECKED BY: EH		DRAWING NUMBER EC01 SHEET 1 OF 15	

DWG FILE: 1175.00.101\_EC02.dwg 8:35am PLOTTED: Mar 07, 2006 gfron

MOHAVE COUNTY, AZ.  
GOLDEN VALLEY RANCH WELL NO.1  
RTU DESIGN  
SHEET INDEX

SHEET	DRAWING TITLE
EC01	COVER SHEET
EC02	SHEET INDEX
EC03	ELECTRICAL SYMBOLS & ABBREVIATIONS
EC04	ISA TABLE AND COMMON LEGENDS SHEET
EC05	BILL OF MATERIALS
EC06	RTU ENCLOSURE LAYOUT
EC07	RTU PANEL LAYOUT
EC08	TERMINAL BLOCK & DEVICE DETAILS
EC09	COMMUNICATION SYSTEMS ARCHITECTURE
EC10	POWER DISTRIBUTION SCHEMATIC
EC11	SLOT 1 ANALOG INPUT SCHEMATIC
EC12	SLOT 2 ANALOG INPUT SCHEMATIC
EC13	SLOT 3 DISCRETE INPUT SCHEMATIC
EC14	SLOT 4 DISCRETE INPUT SCHEMATIC
EC15	SLOT 5 DISCRETE OUTPUT SCHEMATIC



**DL Engineering & Controls**  
3550 N. Central Ave. Ste. 1900 Phx., AZ 85012



5820 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89119  
(702) 369-9396 Fax (702) 369-9793  
www.stanleygroup.com

**Stanley Consultants INC.**



NOTES  
90%  
PRELIMINARY

REVISIONS








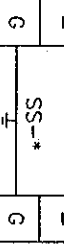
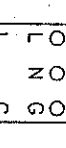




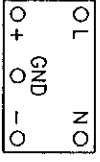
REV.	BY	DATE	DESCRIPTION

GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ

SHEET INDEX

DRAWN BY: GAF	PROJECT NO. 1175.00.101
DESIGNED BY: GAF	SUBMITAL DATE: MARCH 2006
CHECKED BY: EH	DRAWING NUMBER EC02 SHEET 2 OF 15

DWG FILE: 1175.00.101\_EC03.dwg 8:35am PLOTTED: Mar 07, 2006 gfron

MOHAVE COUNTY, AZ. GOLDEN VALLEY RANCH WELL NO.1 RTU DESIGN ELECTRICAL SYMBOLS AND ABBREVIATIONS																																																											
SCHEMATIC/WIRING DIAGRAM SYMBOLS	SCHEMATIC/WIRING DIAGRAM SYMBOLS	ABBREVIATIONS																																																									
<div><div> CIRCUIT BREAKER * A - AMP RATING</div><div> FUSE WITH PULLER * A - AMP RATING</div><div> SWITCH NORMALLY OPEN</div><div> TERMINAL BLOCK * - TB IDENTIFICATION</div><div> TERMINAL BLOCK W/ FUSE PLUG AND FUSE * - TB IDENTIFICATION * A - AMPS</div><div> TERMINAL BLOCK W/ DISCONNECT KNIFE * - TB IDENTIFICATION</div><div> SURGE SUPPRESSOR FOR FLOATING SIGNAL CIRCUITS * - SS NUMBER IDENTIFICATION</div><div> SURGE SUPPRESSOR FOR POWER SUPPLY * - SS NUMBER IDENTIFICATION</div><div> CONTROL RELAY * - CR NUMBER IDENTIFICATION # - TERMINAL NUMBER</div></div>	<div><div> EARTH GROUND</div><div> TERMINAL BLOCK</div><div> DUPLEX RECEPTACLE</div><div> SINGLE RECEPTACLE</div><div> DC POWER SUPPLY * - DC VOLTAGE RATING</div></div>	<div><div>A/R AC COM AFT ANL COM AO AWG BLK BLU CAP CLR CR DC COM DC+ DI DO DS FOM FOT GND GRN I/O L LINE N NC NO NP OIT ORN PDB PLC PP PS REC RES RIO RTU SLC SP SS TB UPS WHT WTR WTRP</div><div>AS REQUIRED NEUTRAL ABOVE FINISHED FLOOR ANALOG INPUT ANALOG COMMON ANALOG OUTPUT AMERICAN WIRE GAUGE BLACK BLUE CENTRAL ARIZONA PROJECT CLEAR CONTROL RELAY DC COMMON DC POSITIVE POTENTIAL DISCRETE INPUT DISCRETE OUTPUT DOOR SWITCH FIBER OPTIC MODEM FIBER OPTIC TRANSCEIVER GROUND GREEN INPUT/OUTPUT LINE NEUTRAL NORMALLY CLOSED NORMALLY OPEN NAMEPLATE OPERATOR INTERFACE TERMINAL ORANGE POWER DISTRIBUTION BLOCK PROGRAMMABLE LOGIC CONTROLLER FIBER OPTIC PATCH PANEL POWER SUPPLY RECEPTACLE RESERVOIR REMOTE INPUT/OUTPUT REMOTE TELEMETRY UNIT SMALL LOGIC CONTROLLER SPACE SURGE SUPPRESSER TERMINAL BLOCK UNINTERRUPTIBLE POWER SUPPLY WHITE WATER TREATMENT PLANT WASTE WATER TREATMENT PLANT</div></div>																																																									
COLOR CODE CHART FOR 18 AWG BELDEN CABLES 12 COND. NO. 8466 AND 19 COND. NO. 8619																																																											
<table><tr><td>BLACK</td><td>WHT</td><td>1st</td></tr><tr><td>WHITE</td><td>RED</td><td>2nd</td></tr><tr><td>RED</td><td>GRN</td><td>3rd</td></tr><tr><td>GREEN</td><td>ORN</td><td>4th</td></tr><tr><td>ORANGE</td><td>BLU</td><td>5th</td></tr><tr><td>BLUE</td><td>WHT/BLK</td><td>6th</td></tr><tr><td>WHITE/BLACK</td><td>RED/BLK</td><td>7th</td></tr><tr><td>RED/BLACK</td><td>GRN/BLK</td><td>8th</td></tr><tr><td>ORANGE/BLACK</td><td>ORN/BLK</td><td>9th</td></tr><tr><td>BLUE/BLACK</td><td>BLU/BLK</td><td>10th</td></tr><tr><td>BLACK/WHITE</td><td>BLK/WHT</td><td>11th</td></tr><tr><td>RED/WHITE</td><td>RED/WHT</td><td>12th</td></tr><tr><td>GREEN/WHITE</td><td>GRN/WHT</td><td>13th</td></tr><tr><td>BLUE/WHITE</td><td>BLU/WHT</td><td>14th</td></tr><tr><td>BLACK/RED</td><td>BLK/RED</td><td>15th</td></tr><tr><td>WHITE/RED</td><td>WHT/RED</td><td>16th</td></tr><tr><td>ORANGE/RED</td><td>ORN/RED</td><td>17th</td></tr><tr><td>BLUE/RED</td><td>BLU/RED</td><td>18th</td></tr><tr><td></td><td></td><td>19th</td></tr></table>			BLACK	WHT	1st	WHITE	RED	2nd	RED	GRN	3rd	GREEN	ORN	4th	ORANGE	BLU	5th	BLUE	WHT/BLK	6th	WHITE/BLACK	RED/BLK	7th	RED/BLACK	GRN/BLK	8th	ORANGE/BLACK	ORN/BLK	9th	BLUE/BLACK	BLU/BLK	10th	BLACK/WHITE	BLK/WHT	11th	RED/WHITE	RED/WHT	12th	GREEN/WHITE	GRN/WHT	13th	BLUE/WHITE	BLU/WHT	14th	BLACK/RED	BLK/RED	15th	WHITE/RED	WHT/RED	16th	ORANGE/RED	ORN/RED	17th	BLUE/RED	BLU/RED	18th			19th
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<div><div>----- FIELD WIRING</div><div>----- INTERNAL PANEL WIRING</div><div>----- RADIO COMMUNICATION LINK</div><div>----- FIBER OPTIC CABLE</div><div>----- FOP ----- FIBER OPTIC PATCH CABLE</div><div>----- EN ----- ETHERNET CAT5 CABLE</div><div>----- DH+ ----- DATA HIGHWAY PLUS</div><div>----- RIO ----- REMOTE INPUT OUTPUT</div><div>----- AREA DIVIDER</div><div>----- EQUIPMENT</div><div>----- PATCH PANEL</div></div>																																																											

  
EARTH GROUND

  
TERMINAL BLOCK


  
DUPLEX RECEPTACLE

  
SINGLE RECEPTACLE


  
DC POWER SUPPLY  
\* - DC VOLTAGE RATING

COLOR CODE CHART FOR 18 AWG BELDEN CABLES  
12 COND. NO. 8466 AND 19 COND. NO. 8619


BLACK	BLK	1st
WHITE	WHT	2nd
RED	RED	3rd
GREEN	GRN	4th
ORANGE	ORN	5th
BLUE	BLU	6th
WHITE/BLACK	WHT/BLK	7th
RED/BLACK	RED/BLK	8th
GREEN/BLACK	GRN/BLK	9th
ORANGE/BLACK	ORN/BLK	10th
BLUE/BLACK	BLU/BLK	11th
BLACK/WHITE	BLK/WHT	12th
RED/WHITE	RED/WHT	13th
GREEN/WHITE	GRN/WHT	14th
BLUE/WHITE	BLU/WHT	15th
BLACK/RED	BLK/RED	16th
WHITE/RED	WHT/RED	17th
ORANGE/RED	ORN/RED	18th
BLUE/RED	BLU/RED	19th



**IDL Engineering & Controls**  
3550 N. Central Ave., Ste. 1900 Phx., AZ 85012



**Stanley Consultants INC.**  
5820 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89119  
(702) 369-9396 Fax (702) 369-9793  
www.stanleygroup.com



Registered Professional Engineer (Electrical)  
CERTIFICATE NO. 31724  
BRIAN D. DOWNING  
State of Arizona

NOTES

90% PRELIMINARY

REVISIONS

REV.	BY	DATE	DESCRIPTION

GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ

ELECTRICAL SYMBOLS & ABBREVIATIONS

DRAWN BY:	GAF	PROJECT NO.	1175.00.101
DESIGNED BY:	GAF	SUBMITTAL DATE:	MARCH 2006
CHECKED BY:	EH	DRAWING NUMBER	EC03
		SHEET	3 OF 15



## ISA INSTRUMENT IDENTIFICATION TABLE

FIRST LETTERS		SUCCEEDING LETTERS		
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A ANALYZER		ALARM		AUTO
B BURNER, COMBUSTION				
C CONDUCTIVITY			CONTROL	CLOSED
D DENSITY	DIFFERENTIAL			
E VOLTAGE		ELEMENT		
F FLOW	RATIO			
G GAUGE		GLASS, VIEWING DEVICE		
H HAND				HIGH
I CURRENT		INDICATE		
J POWER	SCAN			
K TIME, TIME SCHED.	TIME RATE OF CHANGE		CONTROL STATION	
L LEVEL		LIGHT		LOW
M MOTION				MIDDLE
N INTRUSION				NORMAL
O TORQUE		ORIFICE, RESTRICTION		OPEN
P PRESSURE		POINT CONNECTION		STOP
Q QUANTITY	INTEGRATE, TOTALIZE			
R RADIATION		RECORD, OR PRINT		REMOTE
S SPEED, FREQUENCY	SAFETY		SWITCH	START
T TEMPERATURE			TRANSMIT	
U MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V VIBRATION			VALVE, LOUVER	
W WEIGHT		WELL		
X MOTOR	X-AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y EVENT STATE, OR PRESENCE	Y-AXIS		RELAY, COMPUTE, CONVERT	
			DRIVER, ACTUATOR, FINAL CONTROL ELEMENT	
Z POSITION	Z-AXIS			

## PANEL WIRING IDENTIFICATION


TERMINAL NO.  
 TERMINAL STRIP NO.  
 DEVICE TAG NO.

TO TERMINAL NO.   
 TO TERMINAL STRIP NO.   
 FROM TERMINAL NO.   
 FROM TERMINAL STRIP NO.


INPUT POINT NO.  
TERMINAL STRIP NO.  
CHANNEL #  
SLOT #  
0=OUTPUT 1=INPUT

BLACK	BLK	1st
CLEAR	CLR	2nd

BLACK - 120VAC LINE  
WHITE - 120VAC NEUTRAL  
GREEN - GROUND  
ORANGE - DC POSITIVE  
BLUE - DC COMMON



**DIL engineering & controls**  
3550 N. Central Ave. Ste. 1900 Phx., AZ 85012

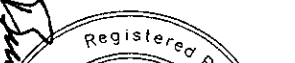


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5820 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89119  
(702) 369-9386 Fax (702) 369-9793  
www.stanleygroup.com

**NOTES**

**90%**

**PRELIMINARY**






*Brian Downing*

REVISIONS	
REV.	BY DATE DESCRIPTION

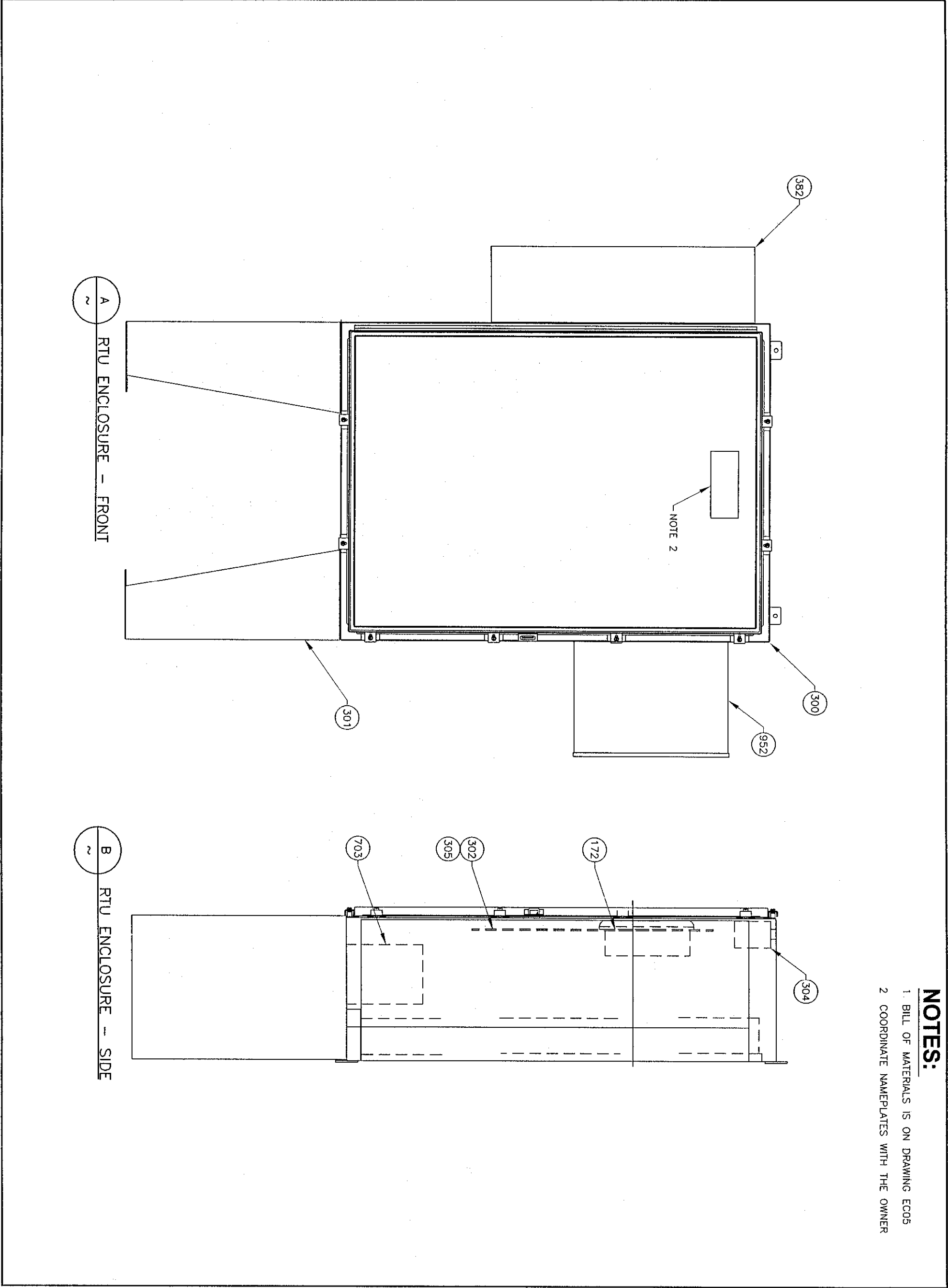
GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ




**ISA TABLE &  
COMMON LEGENDS  
SHEET**

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DESIGNED BY: <b>GAF</b>	SUBMITAL DATE: <b>MARCH 2006</b>
CHECKED BY: <b>EH</b>	DRAWING NUMBER <b>EC04</b>
SHEET 4 OF 15	

 <p><b>DIL engineering &amp; controls</b> 3550 N. Central Ave. Ste. 1900 Phx., AZ 85012</p>		 <p><b>Stanley Consultants INC.</b> 5820 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89119 (702) 369-9396 Fax (702) 369-9793 <a href="http://www.stanleygroup.com">www.stanleygroup.com</a></p>																																	
 <p><i>Brian D. Downing</i> 1-PRZM 3-10-06</p>		<p>NOTES</p> <p><b>90%</b></p> <p><b>PRELIMINARY</b></p>																																	
<p>REVISONS</p> <table border="1"> <thead> <tr> <th>REV.</th> <th>BY</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>				REV.	BY	DATE	DESCRIPTION																												
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<p>DRAWN BY: GAF</p>		<p>PROJECT NO. 1175.00.101</p>																																	
<p>DESIGNED BY: GAF</p>		<p>SUBMITTAL DATE: MARCH 2006</p>																																	
<p>CHECKED BY: EH</p>		<p>DRAWING NUMBER <b>EC05</b> SHEET 5 OF 15</p>																																	

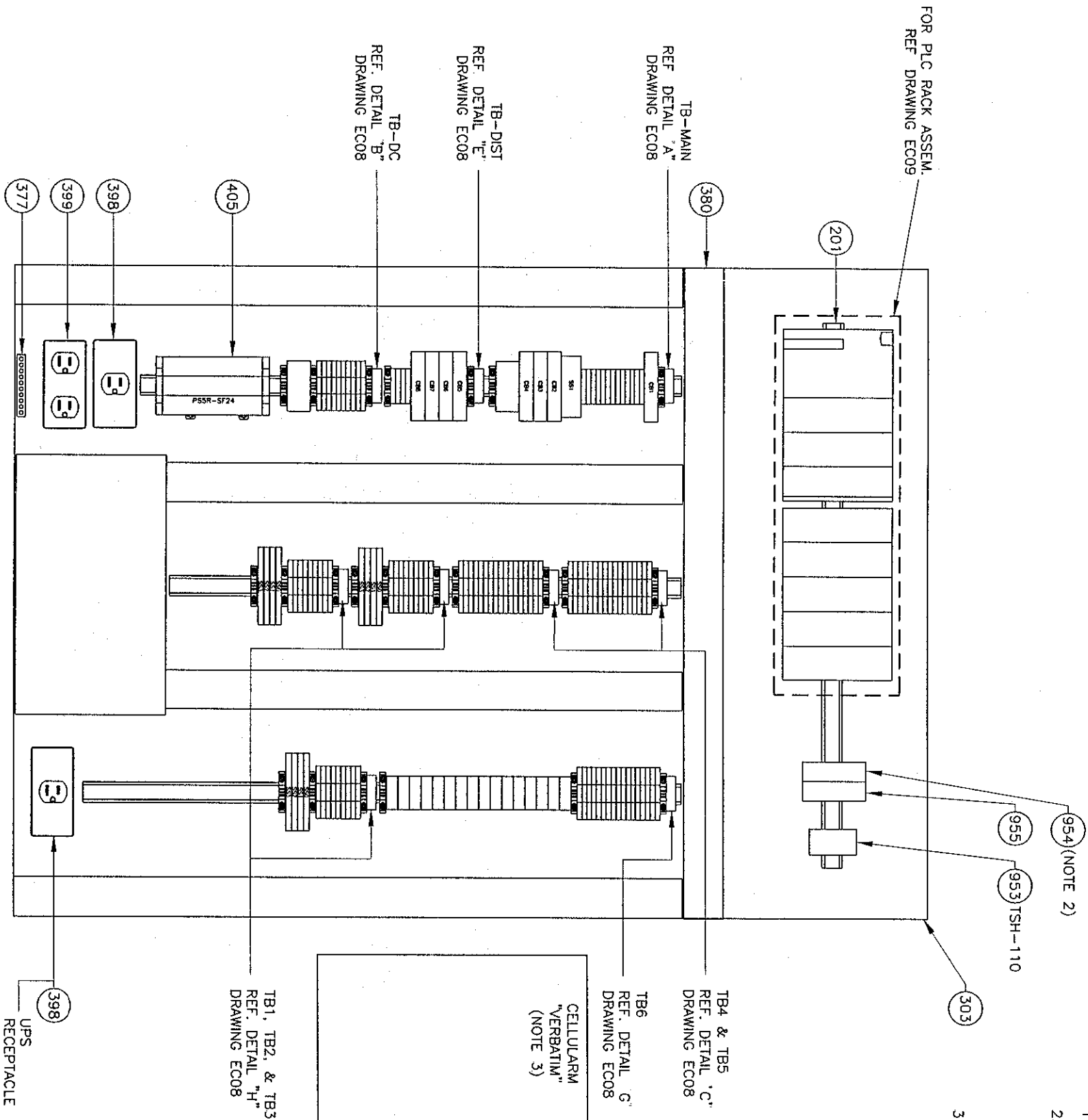
DWG FILE: 1175.00.101\_EC06.dwg 8:37am PLOTTED: Mar 07, 2006 gfron



 DL Engineering & Controls 3550 N. Central Ave. Ste. 1900 Phx., AZ 85012		 Stanley Consultants INC. 5820 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89119 (702) 369-9396 Fax (702) 369-9793 www.stanleygroup.com																									
 Brian D. Downing 4/17/2006		<p>NOTES</p> <p>90% PRELIMINARY</p>																									
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<p>RTU ENCLOSURE LAYOUT</p>																											
<p>DRAWN BY: GAF</p>		<p>PROJECT NO. 1175.00.101</p>																									
<p>DESIGNED BY: GAF</p>		<p>SUBMITAL DATE: MARCH 2006</p>																									
<p>CHECKED BY: EH</p>		<p>DRAWING NUMBER EC06</p>																									
		<p>SHEET 6 OF 15</p>																									



DWG FILE: 1175.00.101\_EC07.dwg 8:43am PLOTTED: Mar 07, 2006 gfron



**NOTES:**

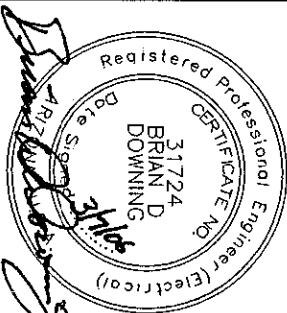
1. BILL OF MATERIALS IS ON DRAWING EC05
2. THE TRANSCEIVER MODULES COME AS A SET. PROVIDE SISTER MODULE TO THE RESERVOIR #1 SITE RIO-400 FOR SYSTEM COMMUNICATIONS. COORDINATE THE RADIO LINK AS REQUIRED, WITH THE RESERVOIR RIO-400 CONTRACTOR. TO INSURE A COMPLETE SYSTEM.
3. MOUNT CELLULARM ENCLOSURE TO SIDE OF RTU CABINET, REFER TO DWG EC06. USE CHASE NIPPLES FOR CIRCUIT RACEWAYS.



**DL Engineering & Controls**  
3550 N. Control Ave. Ste. 1900 Phx., AZ 85012



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**REVISIONS**

REV.	BY	DATE	DESCRIPTION
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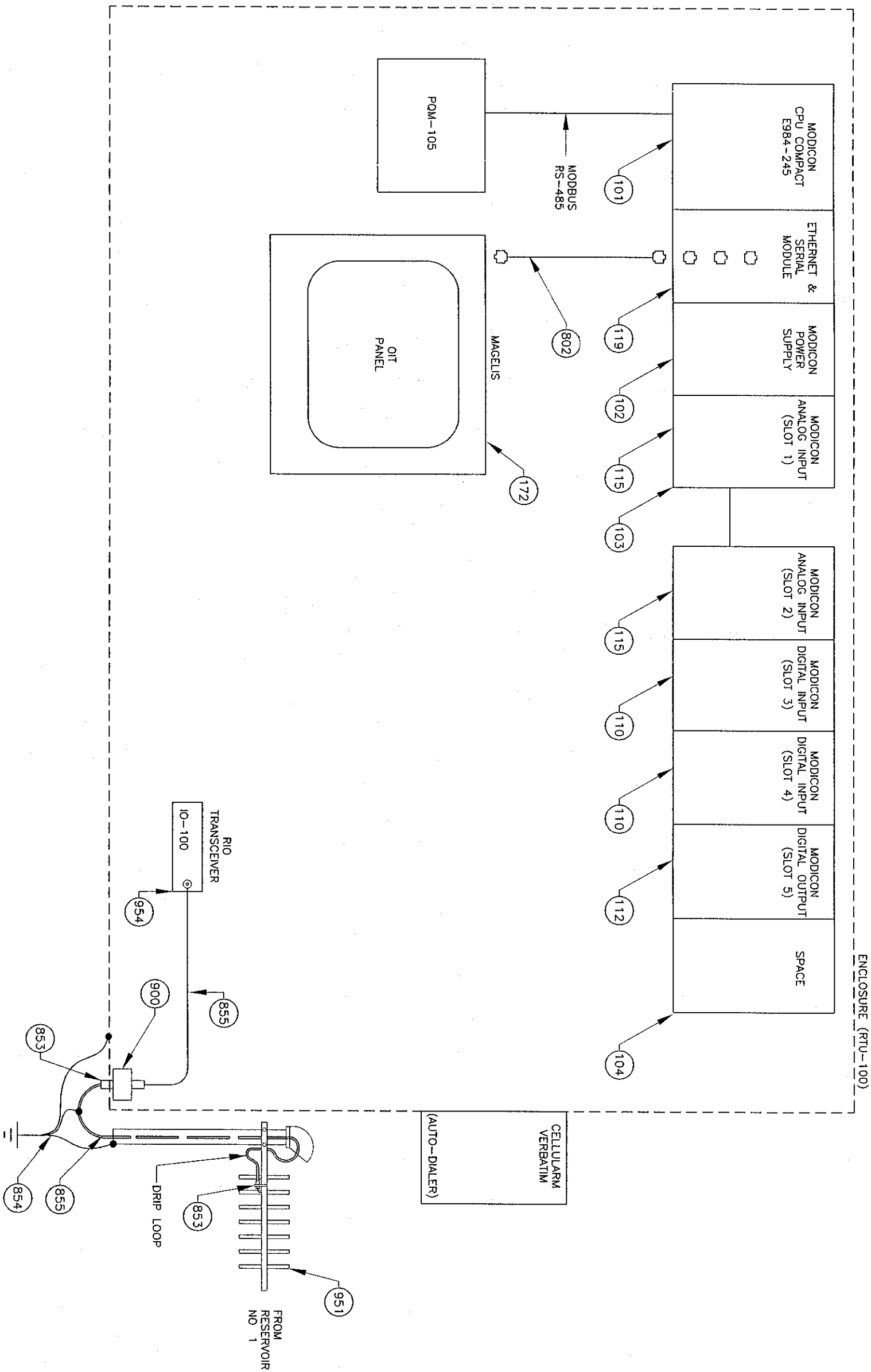
GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ

RTU  
PANEL  
LAYOUT

DRAWN BY: GAF	PROJECT NO. 1175.00.101
DESIGNED BY: GAF	SUBMITAL DATE: MARCH 2006
CHECKED BY: EH	DRAWING NUMBER EC07
	SHEET 7 OF 15



DWG FILE: 1175.00.101\_EC09.dwg 8:37am PLOTTED: Mar 07, 2006 qfran



**NOTES:**

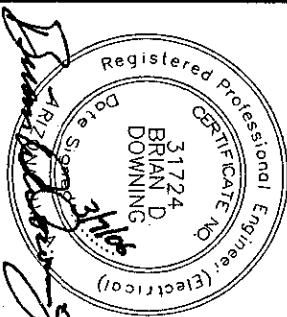
1 BILL OF MATERIALS IS ON DRAWING EC05



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**COMMUNICATIONS  
SYSTEMS  
ARCHITECTURE**

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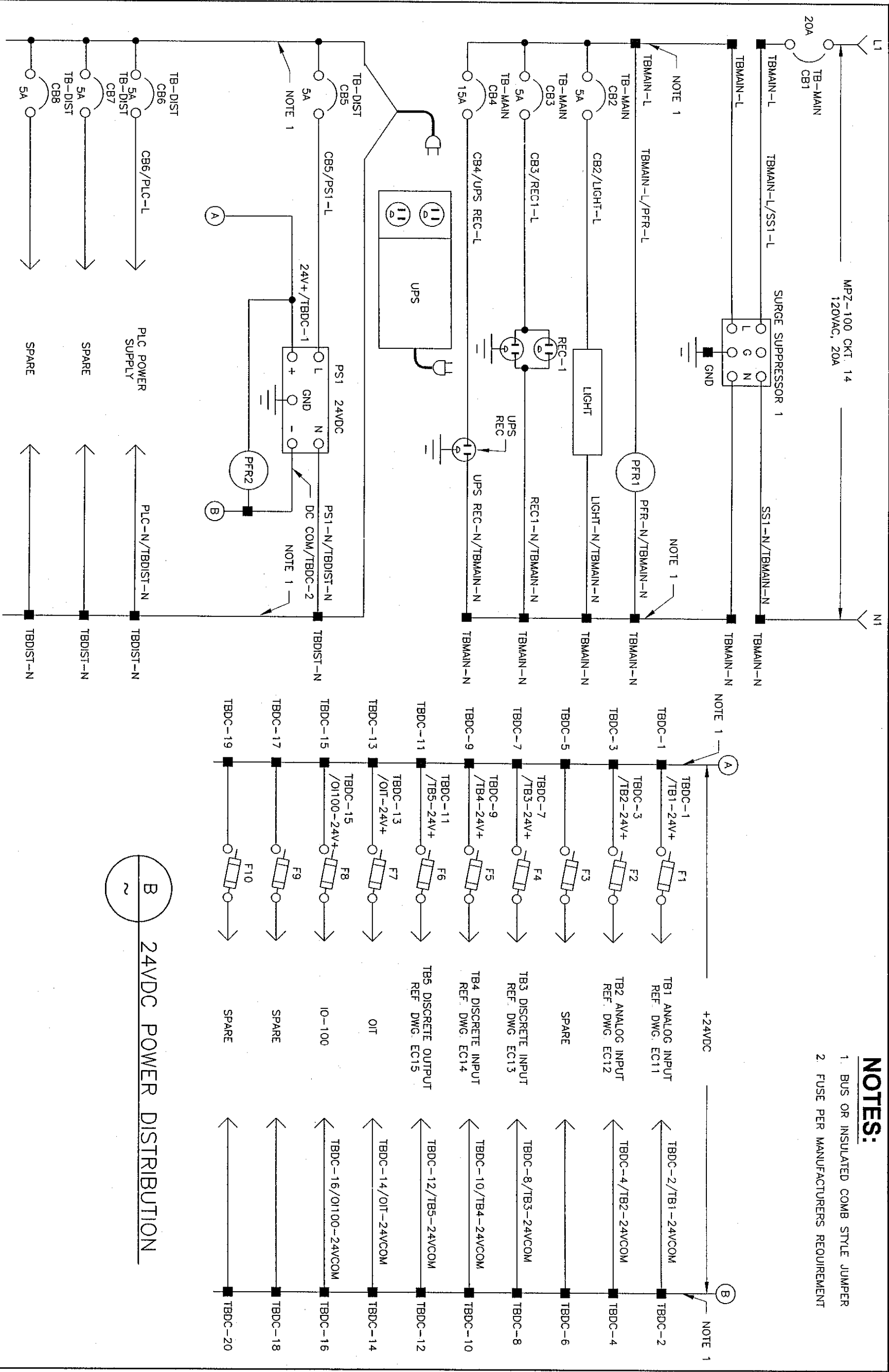
DESIGNED BY: GAF SUBMITTAL DATE: MARCH 2006

CHECKED BY: EH DRAWING NUMBER EC09

SHEET 9 OF 15



DWG FILE: 1175.00.101\_EC10.dwg 8:37am PLOTTED: Mar 07, 2006 gfron



**NOTES:**

1. BUS OR INSULATED COMB STYLE JUMPER
2. FUSE PER MANUFACTURERS REQUIREMENT



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**POWER DISTRIBUTION SCHEMATIC**

DRAWN BY:	PROJECT NO.
GAF	1175.00.101
DESIGNED BY:	SUBMITAL DATE:
GAF	MARCH 2006
CHECKED BY:	DRAWING NUMBER
EH	EC10
	SHEET 10 OF 15



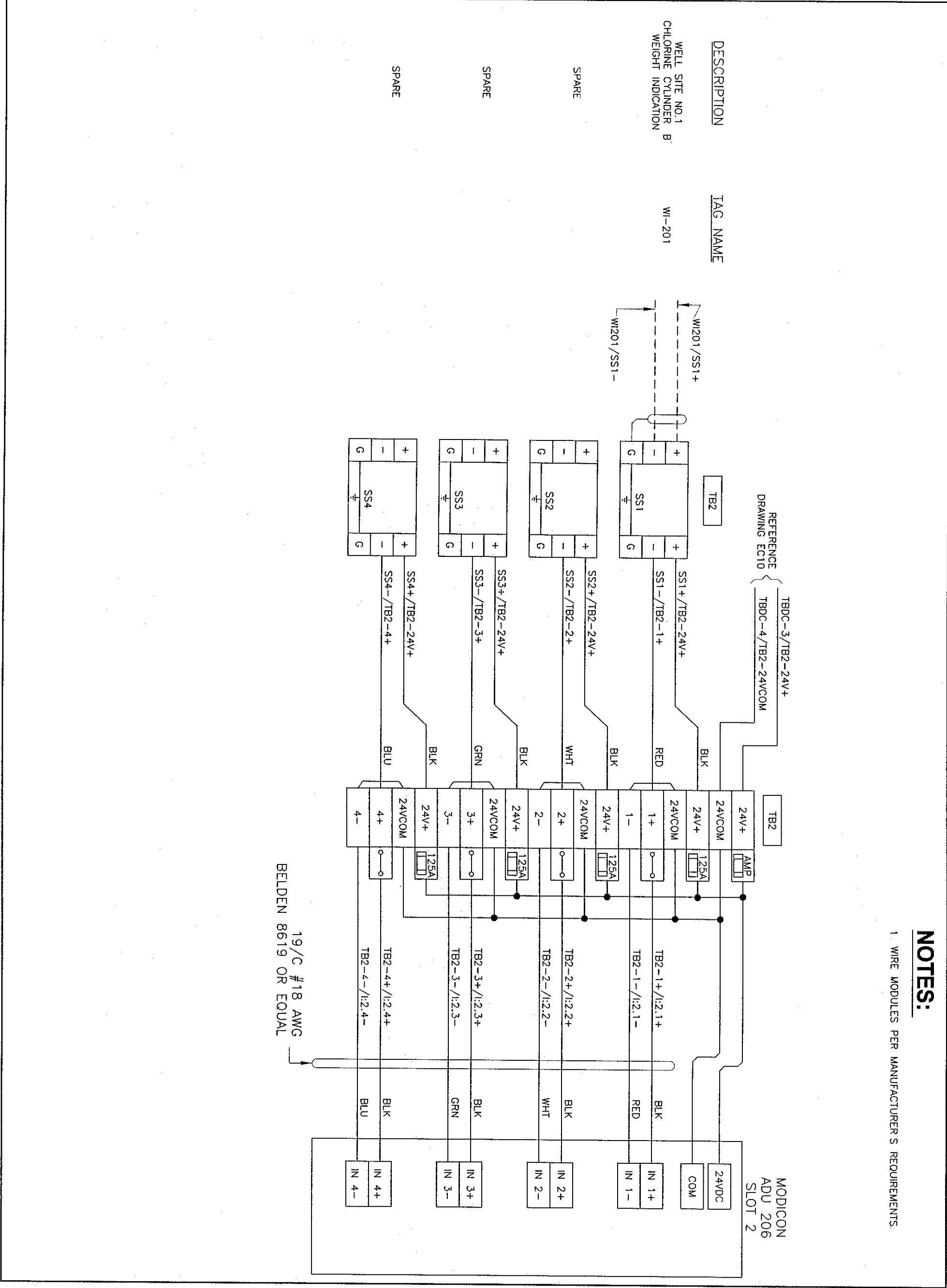
## NOTES:

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DWG FILE: 1175.00.101\_EC12.dwg 8:37am PLOTTED: Mar 07, 2006 gfron



NOTES:

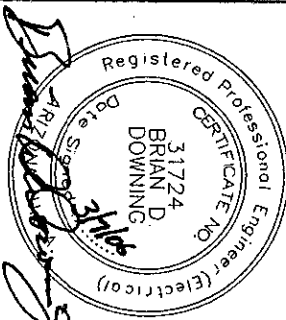
1. WIRE MODULES PER MANUFACTURER'S REQUIREMENTS.



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GOLDEN VALLEY RANCH WELL #1  
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SLOT 2  
ANALOG INPUT  
SCHEMATIC

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	SHEET 12 OF 15



1. WIRE MODULES PER MANUFACTURER'S REQUIREMENTS.
2. BUS OR INSULATED COMB STYLE JUMPER

19/C #18 AWC  
BELDEN 8619 OR EQUAL



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REV.	BY	DATE	DESCRIPTION

GOLDEN VALLEY RANCH WELL #1  
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SLOT 3  
DISCRETE INPUT  
SCHEMATIC

DWG FILE: 1175.00.101\_EC14.dwg 8:37am PLOTTED: Mar 07, 2006 glron

NOTES:

- 1 WIRE MODULES PER MANUFACTURER'S REQUIREMENTS
- 2 BUS OR INSULATED COMB STYLE JUMPER

DESCRIPTION	TAG NAME
WELL SITE NO.1 WELL PUMP RUN STATUS	YIR-100
WELL SITE NO.1 WELL PUMP AUTO STATUS	YIA-100
WELL SITE NO.1 WELL PUMP FAULT ALARM	YA-100
SPARE	
WELL SITE NO.1 PUMP-TO-WASTE VALVE OPEN STATUS	ZIO-100
WELL SITE NO.1 PUMP-TO-WASTE VALVE CLOSED STATUS	ZIC-100
WELL SITE NO.1 RESERVOIR NO.1 FLOW VALVE OPEN STATUS	ZIO-101
WELL SITE NO.1 RESERVOIR NO.1 FLOW VALVE CLOSED STATUS	ZIC-101
WELL SITE NO.1 WELL PUMP VALVE INCOMPLETE SEQUENCE ALARM	YAV-100
WELL SITE NO.1 WELL PUMP HIGH PRESSURE ALARM	PAH-100
SPARE	
SPARE	
SPARE	
SPARE	
SPARE	
SPARE	

REFERENCE  
DRAWING EC10

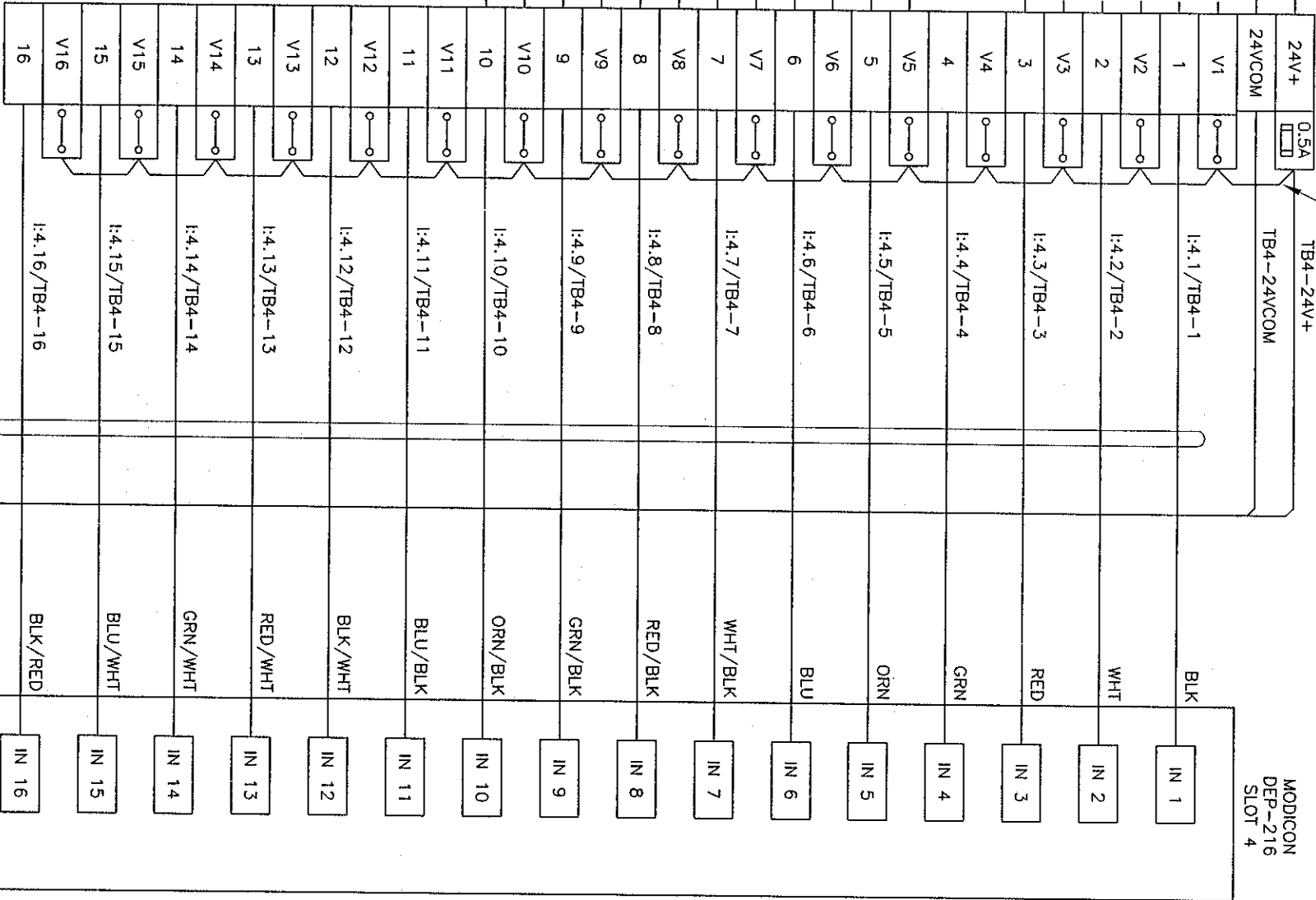
TBDC-9/TB4-24V+

TBDC-10/TB4-24VCOM

TB4

NOTE 2

MODICON  
DEP-216  
SLOT 4



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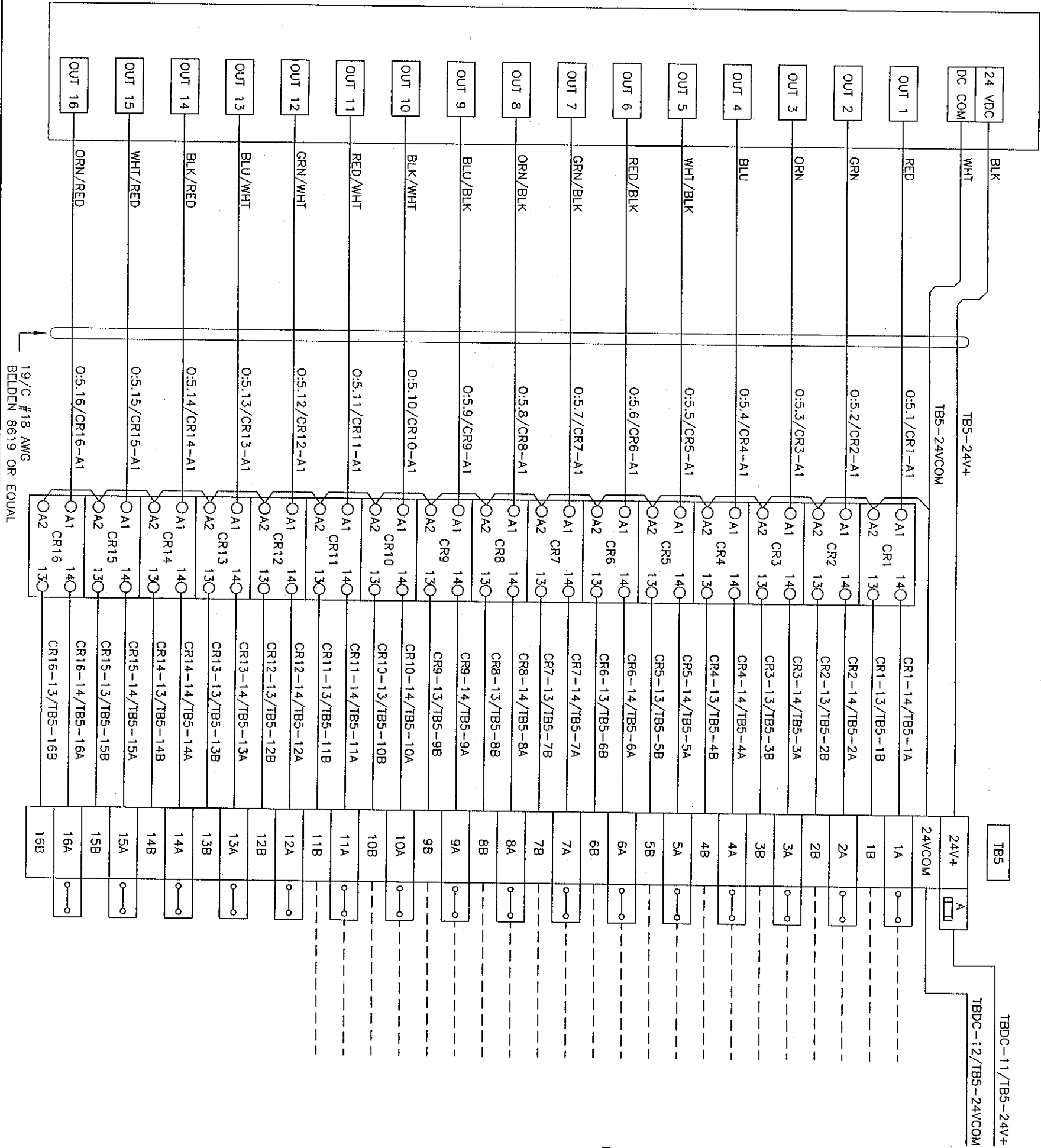
REVISIONS		
REV.	BY	DATE

GOLDEN VALLEY RANCH WELL #1  
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MOHAVE COUNTY, AZ

SLOT 4  
DISCRETE INPUT  
SCHEMATIC

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SHEET 14 OF 15	

DWG FILE: 1175.00.101\_EC15.dwg 8:37am PLOTTED: Mar 07, 2006 gfron



NOTES:

- 1 WIRE MODULES PER MANUFACTURER'S REQUIREMENTS
- 2 BUS OR INSULATED COMB STYLE JUMPER

TAG NAME

DESCRIPTION

YCR-100

WELL SITE NO.1  
WELL PUMP  
PLC RESET

LAHH-100A

RESERVOIR NO.1  
HIGH HIGH  
LEVEL ALARM

YC-100

WELL SITE NO.1  
WELL PUMP  
START/STOP COMMAND

JA-400A

RESERVOIR NO.1  
RIO POWER  
FAILURE ALARM

AAL-200

WELL SITE NO.1  
CHLORINE  
LEAK ALARM

LAHH-100B

RESERVOIR NO.1  
HIGH HIGH  
LEVEL ALARM

YA-100

WELL SITE NO.1  
WELL PUMP  
FAULT ALARM

YA-200

WELL SITE NO.1  
CHLORINE BOOSTER PUMP  
FAULT ALARM

SPARE

YA-101A WELL SITE NO.1/RESERVOIR NO.1  
INTRUSION ALARM

YA-105 WELL SITE NO.1  
LOSS OF POWER

SPARE

SPARE

SPARE

SPARE

SPARE

SLOT 6  
DISCRETE OUTPUT  
SCHEMATIC

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		SHEET 15 OF 15	



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